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The Jewel of Brewerytown: Past, Present, and Future at The Poth Brewery

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The Jewel of Brewerytown: Past, Present, and Future at The Poth Brewery

Abstract

The former F.A. Poth Brewing Company at 31st and Jefferson Streets in Brewerytown is one of the last remaining 19th century brewery structures in Philadelphia and a beautiful example of the Rundbogenstil-style industrial architecture designed by architect Otto C. Wolf. This thesis draws upon primary sources, including insurance surveys, maps, promotional pamphlets, and advertisements to map the evolution of the brewery in from its very beginnings to its heyday and subsequent decline, with an emphasis on the ways in which the spatial layout of the site functioned as part of the industrial brewing process. It then examines existing literature on adaptive reuse of industrial buildings and builds on several examples from around the nation of successful brewery revitalization projects. The paper concludes with examining future reuse options for the site and how these uses can best be incorporated into a historic brewery building without compromising its historic integrity as a “master machine.”

Keywords

adaptive reuse, brewing industry, industrial heritage, Brewerytown, Rundbogenstil

Disciplines

Architectural History and Criticism | Historic Preservation and Conservation | United States History

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THE JEWEL OF BREWERYTOWN:
PAST, PRESENT, AND FUTURE AT THE POTH BREWERY

Mary Elizabeth Feitz

A THESIS

in

HISTORIC PRESERVATION

Presented to the Faculties of the University of Pennsylvania in
Partial Fulfillment of the Requirements of the Degree of

MASTER OF SCIENCE IN HISTORIC PRESERVATION

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This thesis is dedicated to my mother, Virginia Weaver Feitz, who has encouraged and supported me unconditionally in all of my journeys, academic and otherwise. Without her, I would not be even half of the person I am today.

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LIST OF IMAGES

Key to Image Sources (where images were obtained/are archived):

FAL- Fisher Fine Arts Library, University of Pennsylvania

HAG- Hagley Library

LCP- Library Company of Philadelphia

LIU- Lindsey Uhl

MEF- Mary Elizabeth Feitz (a.k.a. the author)

PGH- www.philageohistory.org

OTH- Other (specified in caption)

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There's diamonds in the sidewalk, the gutters lined in song
Dear, I hear that beer flows through the faucets all night long
There's treasure for the taking, for any hard working man
Who'll make his home in the American land

-Bruce Springsteen, "American Land"

CHAPTER 1. THE POTH BREWERY IN CONTEXT



(Figure 1.1. *The Poth Brewery as it looked around 1900, at the peak of its productivity. Source: Hagley Image Archive)*

INTRODUCTION:

Philadelphia has perhaps the richest industrial history of any U.S. city. Once nicknamed the “Workshop of the World,” its factories produced everything from saws to hosiery to trolley cars. Of all these industries, brewing was one of the largest in scope, giving a name to an entire community: Brewerytown. This neighborhood, located on the eastern banks of the Schuylkill River approximately two miles north of Center City was not the only place in the city where breweries were located, but it was home to an especially dense cluster in close proximity. Of all these breweries only the former F.A. Poth Brewery, at the corner of 31st and Jefferson Streets, stands as a relatively intact example of the architecture used in Philadelphia brewery construction during the 19th and early 20th century. In particular, it showcases the work of Otto C. Wolf, a Philadelphia-based architect who specialized in Rundbogenstil-esque brewery design. It is the only Brewerytown brewery that is still standing and has not been converted into another use. Once a vast complex, the site has been significantly reduced in size since its heyday. However, several of its most architecturally and functionally distinctive features still remain and the surviving parts of the brewery retain their general 19th century form. The surrounding neighborhood has been gradually gentrifying over the past two decades, with nearby industrial buildings being demolished or converted into apartments or condominiums. With these development pressures threatening the site, a thorough study of its current state and preservation potential is essential.

The Poth Brewery site is significant for larger reasons as well. In the first years of the 20th century, the brewery gained national recognition for employing innovative brewing technologies. It was one of the first breweries in the city to adapt to a new type of malt house technology—the Saladin Box. Poth was also at the forefront of brewery construction technology, one of the first breweries in Philadelphia to use reinforced concrete slab floors.¹ Furthermore, it was one of the largest breweries of its day, with an annual output of over 180,000 barrels at the height of its success. While such figures pale in comparison to those of today’s megabreweries, Poth’s brewery achieved its peak production at a time when most breweries produced under 50,000 barrels a year.

In the following chapters, I will summarize the history of the F.A. Poth Company from the 1860s to the 1930s in the context of national trends and events in the brewing industry during this period, as well as map the evolution of the Poth Brewery complex from its beginnings to today.

¹ Jason Clark, “Microbrewery: The Process of Making” (Graduate Thesis, Temple University, 1996).

I. THE BREWING INDUSTRY BEFORE 1870

On August 30th, 1871, a deed officially granted Frederick August Poth ownership of a small brewing operation at 31st and Jefferson Streets in Brewerytown.² This was the former site of a brewery owned by Jacob Bentz and Jacob Reilly, which was in operation for less than three years. By 1870, Bentz and Reilly had been forced to shut down their operation and soon it was taken over by the City. George W. Tryon, a representative of the City, deeded the property to Poth for the sum of \$2,900. This key event in the life of the brewery also came during a time of great change in the brewing industry in the United States. The consumption of alcoholic beverages, of course, has been a part of American culture since the first European colonists set foot on the continent. Trends in alcohol consumption varied by region, but generally reflected the immigrant demographics that settled there. Prior to the mid-1800s, the most common alcoholic beverages in the United States were ale, whiskey, rum, and cider. These were consumed with meals, at work, at home, and for celebrations and festivals. This reflected British drinking habits of the day. Drinking was not primarily seen as a way to become intoxicated, but as a healthful means of hydration.³ Most water at that time was considered unsafe to drink and therefore ale and other liquors were seen as a more hygienic option. Physicians recognized that excessive drinking was harmful to health, but the first

² Philadelphia Deed Book JAH 180, pg. 29, 1871.

³ Elise Lathrop, *Early American Inns and Taverns* (New York: Robert McBride and Co., 1926), viii.

treatments for “delirium tremens” were not developed until 1813.⁴ Some physicians and others concerned with the “moral health” of the young nation advised against the overconsumption of alcohol and warned of its ill effects. One of these early temperance advocates was Benjamin Rush. In 1790, he published a pamphlet titled “Inquiry into the Effects of Spiritous Liquors on the Human Body.” In it, he argued that excessive drunkenness would corrupt the young Republic, “destroying the youthful vigor and virtue of the American people,” the qualities that distinguished the United States from “depraved and decrepit Europe.”⁵ Included in this pamphlet is a chart titled “A Moral and Physical Thermometer: Or, A Scale of the Progress of Temperance and Intemperance.”⁶ Water, milk, and “small beer”—beer with low alcohol content—appear at the top of his chart as beverage choices that will lead to “health, wealth, and happiness.” In contrast, excessive drinking of spirit-infused bitters, “morning drams,” and “pepper in rum” will lead to intemperance and dire consequences like suicide, death by disease, and death at the gallows. Rush’s belief that spirits were far more dangerous than almost-benign beer was common to the time, and this attitude would later help shape the 19th century lager beer industry. Rush became disillusioned with American drinking habits later in his life as he realized that, despite his warnings about the dangers of alcohol, the “rational” citizens of the Republic still drank excessively. He began to realize that it would be easier to “arrest the orbs of heaven in their course” than to “suddenly change the

⁴ Matthew Warner Osborn, *Rum Maniacs: Alcohol Insanity in the Early American Republic*. (Chicago: The University of Chicago Press, 2014), 2.

⁵ Osborn, *Rum Maniacs*, 22.

⁶ *Ibid*, 31.

habits of a whole people.”⁷ Nevertheless, his pamphlet was distributed by temperance advocates well into the 19th century. The burgeoning white middle class in the 1820s and 30s began to value temperance, piety, and industry, blaming excessive drinking for a host of social ills including “urban poverty, epidemic disease, and social disorder.”⁸ These were, not coincidentally, the same kinds of social ills that they wished to distance themselves from in order to to gain acceptance from the ruling elite. For entrepreneurs of the early Industrial Revolution, temperance was an attempt to mold “a more industrious male workforce” for the new capitalist economy.⁹

As late as the first decades of the 19th century, no U.S. breweries operated on a large scale. Most were small, family-run affairs. Due to poor transportation networks and the inability to preserve the product over long distances, liquor production was necessarily fragmented. Alcoholic beverages were almost exclusively produced in small home brewing operations. Some of these home operations evolved into “ordinaries,” small establishments that were open for public consumption of liquor. These tended to have very limited space and did not provide the same sort of social environment that later taverns did. Taverns became much more common throughout the 18th century. These establishments were much larger than ordinaries and became gathering social and political gathering spaces, as well as places where travelers could procure a meal and a bed. In colonial

⁷ Ibid, 33.

⁸ Ibid, 6.

⁹ Osborn, *Rum Maniacs*, 6.

Connecticut, it was said that no man was “more than three miles from a tavern.”¹⁰ By the end of the 18th century, Philadelphia had 35 taverns and a street known as “brewers’ alley”.¹¹ Despite these examples of public production and consumption, brewing remained largely a private endeavor well into the 19th century. In 1796, Samuel Child published “Every Man His Own Brewer,” which was aimed at tradesmen who viewed a daily ration of some form of alcoholic beverage a necessity and who wished to learn how to home-brew their own.

Well before the nation’s founding, colonial authorities regulated the number of licenses available to liquor dealers and set limits on excessive drinking. The first tax imposed by the federal government on a domestic product was on distilled spirits such as whiskey. This tax caused outrage among farmers in the western part of the country who distilled their surplus corn or grain into whiskey. These farmers protested the tax by using violence and intimidation to deter tax collectors. This incident became infamously known as the Whiskey Rebellion. The tax was imposed only on distilled spirits, not on beer, which was believed to be a safer and less intoxicating beverage. Less than a generation later, during the War of 1812, a similar excise tax was passed that again excluded malt liquors. Despite the excise tax on distilled spirits, consumption of rum and fermented cider increased from 3.5 gallons per capita in 1770 to 5 gallons in 1825.¹²

¹⁰ Amy Mittelman, *Brewing Battles: A History of American Beer* (New York: Algora, 2008), 10.

¹¹ *Ibid*, 10.

¹² Mittelman, *Brewing Battles*, 16-17.

The national taste for distilled spirits began to change, however, beginning in the middle of the 19th century. Between 1840 and 1860, over 1,350,000 Germans immigrated to the U.S. During that same twenty-year period, per capita beer consumption tripled nationally. Beer—specifically lager beer—was the traditional beverage of choice of the German-speaking provinces. “Lager” comes from the German word for “kept in store,” and reflects an important aspect of the brewing process.¹³ The immigrants brought their brewing techniques and drinking habits with them and they began to permeate mainstream American society.¹⁴ John Wagner of Philadelphia was the first recorded lager brewer in the United States, opening a small home brewing operation in 1840.¹⁵ In addition to places like Philadelphia, large Midwestern cities were centers of German immigration and as a result, the center of the burgeoning lager beer industry. Among the most prominent of these were St. Louis and Milwaukee. Milwaukee boasted Schlitz and Pabst, both of which owned many bars, hotels, and beer gardens. The Schlitz Palm Garden was aimed toward family-style drinking and elaborately decorated with murals, palm trees, and stained glass windows.¹⁶

Not everyone was happy with these changes in the brewing industry, however. Notwithstanding the temperance movement—which began in New England around 1813 and reached an antebellum peak during the 1840s—anti-

¹³ Edwin T. Freedley, *Philadelphia and Its Manufactures: A Handbook of the Great Manufactories and Representative Mercant Houses of Philadelphia* (Edward Young and Co., 1867), 187

¹⁴ Stanley Wade Baron, *Brewed In America: A History Of Beer And Ale In The United States* (Little, Brown, 1962), Chapter 20.

¹⁵ Mittelman, *Brewing Battles*, 20.

¹⁶ *Ibid*, 53.

immigrant Nativists were unhappy with what they deemed a “foreign influence” infiltrating their culture. Liquor license fees increased and Sunday blue laws were strongly enforced in many places. Many German brewers felt as though these tough new regulations were unfairly targeted at them. In Chicago in 1855, tensions escalated between German and Irish immigrants and the police. A police officer was wounded and a young German man was shot.¹⁷ Prior to this incident, public sentiment was generally in favor of the stricter regulations, but after the “Lager Beer Riot” incident, people became more sympathetic to the cause of the immigrants. This, combined with the social and political turmoil leading up to the Civil War, caused the fledgling Prohibitionist movement to decline in influence for more than two decades. It was into this environment that Frederick A. Poth’s brewing company was born.

II. THE BREWING INDUSTRY IN THE HEYDAY OF POTH: 1870-1920

As the brewing industry grew, the professionalism of brewers grew as well. In 1862, the “Lager-Beer Brewers’ Association” was established in New York. Upset by new federal laws taxing their product, representatives from 37 different breweries—all German—came together to fight the tax. They succeeded in repealing a lager tax in 1863, the same year they began to allow non-German members. In 1864, the name was changed to the United States Brewers’

¹⁷ Ibid, 18.

Association.¹⁸ At first, the organization's main focus was taxation, but later it expanded to issues of competition, price, and temperance. Regular conferences and conventions were held at both national and state levels. As technology improved, brewers began to see themselves as "scientists" who had to stay at the top of innovation, if not inventing their own improvements then being the first to use the inventions of others.

Throughout the second half of the 19th century, brewers established trade journals such as *The Western Brewer* and *The Brewer and Maltster* and published books. These publications included general brewers' trade information, including market reports such as the price barley and hops, as well more technical articles about the newest technological advancements in brewing, from refrigeration techniques to storage innovations.¹⁹ They advertised all kinds of machines and supplies that a brewery would need; products such as the "Kaestner Patent Fire Proof and Self-Cleaning Iron Elevator Boost," the "Automatic Barrel Hoister," and "Howard and Morse Brass, Copper, and Iron Wire Cloth."²⁰ They also served as a platform through which contractors and professionals of allied fields could advertise their services. Otto C. Wolf, the main architect for the Poth complex in its first decades, took out regular ads in these publications and his business boomed.

In all types of publications, the major theme that the brewers wanted to convey was that their product was healthful, quality, and safe. They contrasted their

¹⁸ William L. Downard, *Dictionary of the History of the American Brewing and Distilling Industries* (Westport, CT: Greenwood Press, 1980), 197.

¹⁹ Downard, *Dictionary*, 252.

²⁰ *Brewing in Philadelphia: Supplement to "The Western Brewer"* (The Western Brewer, Vol. 6, No. 1, 1881)

product against other types of alcoholic beverages, and claimed that “morality follows in the wake of malt liquor.”²¹ Frederick William Salem argues in his 1880 tract “Beer: Its History and Its Economic Value” that, when properly brewed, lager beer is “hardly intoxicating”²² He describes it as “the universal medicine for the healthy as well as for the sick.”²³ He argues that, by adopting beer in place of “ardent spirits,” intemperance and drunkenness are reduced. That sentiment is echoed in “One Hundred Years of Brewing,” an enormous book published in 1903 by *The Western Brewer* on the occasion of their 25th anniversary. “It may be asserted unhesitatingly that he [the brewer] believes in the manufacture of beer as an incentive to temperance and that his constant aim is to put forth a beverage as pure and nourishing, and yet mildly stimulating, as can be procured by the use of the best materials and the most advanced methods and mechanisms,” the book’s introduction states.²⁴ Furthermore, the specified aim of the book is to “prove that the most enlightened peoples of the earth are gradually abandoning their intoxicating distilled spirits in favor of the purer, more wholesome, and less alcoholic malt liquors.”²⁵

There is certainly an element of defensiveness to these assertions. Around this time, the prohibition movement was gaining momentum across the nation. In 1881, Kansas was the first state to write statewide prohibition into its constitution,

²¹ Mittelman, *Brewing Battles*, 25.

²² F.W. Salem, *Beer, Its History and Its Economic Value* (Hartford, CT: F.W. Salem and Co., 1880), 61.

²³ Ibid.. 67.

²⁴ *One hundred years of brewing : A complete history of the brewing industry of the world* (Chicago, H.S. Rich & Co., 1903), iii.

²⁵ Ibid.

although many other states, famously including Maine, had already passed statutes limiting the sale and consumption of *all* alcoholic beverages, including beer.²⁶ As a result of these threats, brewers tried to dissociate their product from the stigma spread by advocates of prohibition.

The brewery owners were not the only ones impacted by changes in the industry, however. It is estimated that in 1879, there were 22,640 people employed in trades related to the brewing industry—many kinds of adjunct laborers were needed, including builders, drivers, maltsters, firemen, engineers, wagon/harness makers, coppersmiths, and machinists.²⁷ The majority of laborers were unskilled workers, mostly “ethnic” immigrants—at this time, meaning most likely German. The hours were very long: up to 14-16 hour days seven days a week. Workers would often spend up to 18 hours a day in the brewery; with some even sleeping on the premises. In many cases they worked until ten o’clock at night, and were awakened at one in the morning to start work again.²⁸ They were paid very little; average wages stood at around \$350 a year in 1860. The work was grueling and often dangerous, as it involved extreme temperatures and heavy loads.

Because of the terrible working conditions, brewery workers unionized for the first time in 1886. The International Union of United Brewery Workers (UBW) was one of the very first industrial unions given a charter by the AFL. In that same year, they staged a boycott of the Peter Doegler Brewery in Brooklyn, successfully

²⁶ Craig Miner, *Kansas: The History of the Sunflower State, 1854-2000* (University Press of Kansas, 2002), 12.

²⁷ *One Hundred Years of Brewing*

²⁸ Mittelman, *Brewing Battles*, 56.

negotiating a contract that raised wages from \$15 to \$18 a week and reduced working hours to 10 hours a day, 6 days a week.²⁹ The UBW soon spread to other cities across the nation, including Philadelphia. UBW leadership was committed to socialism; one of the union's German leaders even corresponded regularly with Frederick Engels.³⁰ Their main publication, the *Brauer-Zeitung*, declared that "the abolition of classes and class government is our object." These views were outside the mainstream for the time and caused considerable controversy. There was also controversy surrounding the deep connection between saloons and unions. Saloonkeepers were very much a part of the brewery workforce, and it wasn't just brewery workers' unions who met in saloons. Many other industrial unions met in and become intimately connected to varying saloons. Not all union leaders approved of this connection; many wanted to promote temperance in their workers and viewed the saloon as a corrupting influence. These temperance sentiments differed from those of the strict Anti-Saloon League-type prohibitionists, however. They were not against all alcohol, nor even against its production or consumption. In fact, they did not support government-sanctioned prohibition, as they viewed it as an unnecessary federal intrusion in their private lives. Instead, they saw the alcoholism rampant in the working classes as a symptom of an exploitative capitalist structure that oppressed workers and led to social strife.³¹

In 1910, the UBW published a work by Hermann Schluter, entitled "The Brewing Industry and the Brewery Workers' Movement in America." In socialist-

²⁹ Ibid, 56-57

³⁰ Ibid, 61

³¹ Mittelman, *Brewing Battles*,

influenced language, Schluter describes the appalling conditions faced by brewery workers around the country and gives a justification for the actions of the union. One of his main points was that the mechanization of brewery work and the growing output of product set the brewery owner and the brewery laborers apart. Prior to this industrialization, “the relation of the brewer to his workmen corresponded to the relation between the craftsman and the apprentice.”³² He goes on to describe the ways in which this change in labor relations affected the workers, writing that, “The wages paid were the smallest possible... the working time confined only by the natural limits of human endurance.”³³ Furthermore, he clearly implicates brewery owners in violence against their workers, saying “when the brewery owner developed into a great capitalist, he transferred to his foremen the privilege of beating the men.” Despite the image that the lager brewers wanted to create for their product—of a wholesome drink that promoted temperance, their working conditions drove many workers into alcoholism and the brewery owners were fully supportive of the consequences. After all, Schlüter asserts, “sober workmen would not submit to the hard treatment, the inhuman hours of labor, and the low wages that prevailed.... They promoted drunkenness among the men and sought to degrade them in order that they may exploit them.”³⁴

³² Hermann Schlüter, *The Brewing Industry and the Brewery Workers Movement in America* (1910; repr., New York: B. Franklin, 1970), 89.

³³ Ibid, 89.

³⁴ Schlüter, *The Brewing Industry*, 92

III. FREDERICK AUGUST POTH, BREWER.

Like many other brewers of his day, Frederick A. Poth (pronounced “Pōth”) was a German immigrant. He was born on March 20, 1841 in Walhaben, Rheinpfalz Province. From a young age, he had made an impression on the others in his hometown, gaining the nickname “Raritache” or “Little Rarity.”³⁵ He was a Roman Catholic, but unlike thousands of his fellow countrymen, he was not fleeing from religious persecution in his homeland. His motives for immigrating to the United States were careerist: he wanted to make money. He arrived in Philadelphia around 1861, at the age of just 20. He apprenticed himself to the brewers Vollmer and Born, where he got his start shoveling mash out of copper brewing vaults and hauling heavy bags of barley from delivery wagons.

After two years of apprenticeship, Poth bought his first brewery at Third and Green Streets in what is now the Northern Liberties. At this location, he produced approximately 500 barrels a year.³⁶ In 1870, seeking a larger space for his growing business, he purchased the former Bentz and Reilly Brewery on 31st Street between Master and Jefferson in what is now Brewerytown. The neighborhood by this time was a hub of activity for the brewing industry. Prior to the middle of the 19th century, it had been a relatively undeveloped area, allowing for rapid expansion. Furthermore, its geographic proximity to the Schuylkill River and its ice—an

³⁵ “Frederick August Poth,” Philadelphia: Pictorial and Biographical. (Philadelphia, PA: S.J. Clarke and Company, 1911)

³⁶ Rich Wagner, *Philadelphia Beer: A Heady History of Brewing in the Cradle of Liberty* (Charleston, SC: The History Press, 2012), 43.

essential commodity—was very attractive to brewery entrepreneurs. In fact, some of the first structures erected in the neighborhood were icehouses and storage cellars for beer.³⁷ Some of the first breweries to open in Brewerytown would later become the largest breweries in Philadelphia. These included Bergner and Engel, which began operations in 1857 and by 1878 was producing 125,000 barrels a year, making it the third-largest brewery in the nation.³⁸ Other large Brewerytown breweries included J&P Baltz, Henry Mueller’s Centennial Lager Beer Brewery, and the American Brewing Company. These breweries, combined with others from around the state, helped make Pennsylvania second in output only to New York, with over 957,000 barrels per annum.³⁹ This number represents approximately 10% of all output in the United States for the year 1879.

Frederick Poth and his wife, Helena, had six surviving children—two daughters and four sons.⁴⁰ These sons would eventually become partners in the company and after their father’s death, owners. By 1877, Poth’s brewery reached an annual output of 18,000 barrels.⁴¹ Throughout the next two decades this output would only increase as he could afford better technology and expansion of his buildings. In 1887, the brewery was incorporated as the F.A. Poth Brewing Company. In 1898, the name was changed to F.A. Poth and Sons. By 1905, the company also had operations and offices in Trenton and Camden, New Jersey. In the first years of the 20th century, the brewery was operating at its peak of success. Two

³⁷ Ibid.

³⁸ Ibid, 46-47.

³⁹ Salem, *Beer, Its History and Its Economic Value*, 69.

⁴⁰ Sources vary on this—some say five

⁴¹ *One Hundred Years of Brewing*, 201.

popular varieties of beer produced under the F.A. Poth label included “Poth’s Special Pilsner Beer” and “Tivoli Export.”⁴² Both of these brands are advertised in publications of the day, including *The Western Brewer*.

⁴² The F.A. Poth Brewing Company, *Souvenir Album of the F.A. Poth Brewing Company* (Philadelphia: A.M.J. Mueller, 1890)



(Figure 1.2. An advertisement for two varieties of beer produced at the Poth Brewery in "Souvenir Album of the F.A. Poth Brewing Company," 1891.)

The second edition of *One Hundred Years of Brewing* came out in 1903, just as the Poth Brewery was at its peak of production and success. Thus, it is a valuable source to get a picture of what the complex looked like in its heyday. It describes the brewery as "modern in every respect... with a storage capacity of one hundred and

twenty-thousand barrels.” Thus, the brewery was producing over capacity, with one hundred and eighty-thousand barrels being produced in the previous fiscal year (1902). Furthermore, the publication notes that these figures represent entirely home consumption. This fact is particularly interesting to note, as much of the profit of large breweries of the era, such as Schlitz, Anheuser-Busch, and Pabst, came from the partnerships they forged with saloons and other establishments.

Another significant and “modern” aspect of the Poth Brewery was that its malt house was “constructed in the Saladin System.” This system of malting barley was the most technologically-advanced method of its day. It was developed by Jules Alphonse Saladin of France in the 1880s and introduced to the United States by Ambrose Plamondon in 1887.⁴³ The “Saladin Box” consisted of a large metal rectangular container approximately 50 meters in length and large enough to hold a layer of barley about 60 to 80 cm deep. (See Figure 2.9). A crossbar holding large protruding screws moved mechanically through the barley layer, turning and aerating the germinating grain about 2-3 times a day. This mechanical system solved a problem that had plagued brewers for centuries. Early masters of the craft learned quickly that barley that was not turned regularly would grow roots that intertwine together, forming tough mats that are impossible to use. Traditional malt house floors would be built so that a layer of barley could be turned manually by a worker walking across the length of the room. The Saladin System eliminated the need for this job and as a result, radically changed the architecture of malt houses. Modern breweries still use a version of the Saladin System, with the addition of

⁴³ Downard, *Dictionary*, 165.

perforated floors for more efficient cooling, ribbon screws rather than closed screws, and circular vessels rather than rectangular basins.

The brewery complex went through many incarnations over the decades as Poth adapted to these new technologies. During the 1890s, the complex underwent a major renovation, with a new brewhouse being constructed in 1891, a new stockhouse in 1892, and new stables in 1895. An 1896 publication by the United States Brewers' Association on the occasion of its thirty-sixth annual convention in Philadelphia describes the Poth complex in detail. This publication was meant to promote local breweries with the intention inspiring brewers who traveled to Philadelphia to get ideas about their own plants. The USBA's publication highly praises F.A. Poth, writing that "Their new brew house is certainly a model and striking structure in every way. It is 5 stories in height... and absolutely fireproof."⁴⁴ As imposing as these new buildings might have been to visiting USBA members, they could not have been built without the designs of Otto C. Wolf, who served as the architect for all of Frederick A. Poth's major projects.

⁴⁴ *Souvenir of Philadelphia Prepared for the 36th Annual Convention of the United States Brewers' Association* (Philadelphia: 1896).

IV. OTTO C. WOLF, BREWERY ARCHITECT

Otto Charles Wolf was born in Philadelphia in 1856. He earned B.S. degrees in architecture and engineering from the University of Pennsylvania in 1876. Between 1880 and 1882 he worked for his relative Frederick W. Wolf, also an architect, in Chicago, but came back to Philadelphia in 1883 to start his own office.⁴⁵ Between 1892 and 1893 he had a second office in New York City, but his main operation was headquartered at the corner of Broad and Arch Streets in Philadelphia. Wolf specialized in industrial buildings, advertising “complete industrial establishments of all classes requiring combined engineering and architectural skill.”⁴⁶ Although he had a particular interest in breweries, he designed all types of buildings throughout his career, from grain storage buildings, to (a few) residences, to refrigerating plants and power plants. By 1906, he had worked on projects all over the country, as far west as St. Louis, and internationally in places like Calgary, Canada, Christiana, Norway, and Havana, Cuba. In that same year, he published a book listing all of his 444 projects to date.

Thirteen of those projects were completed for F.A. Poth between 1883 and 1905. These include a boiler house and stack in 1883 (the first collaboration between Poth and Wolf), an office building in 1889, seven dwellings in West Philadelphia in 1891 residences for Poth and his family and a new brewhouse in

⁴⁵ Sandra L. Tatman. “Wolf, Otto Charles.” (Philadelphia Architects and Buildings)

⁴⁶ From “Souvenir of Philadelphia”

1892.⁴⁷ The last project Wolf completed for Poth was a new racking room, wash house, storage house, and office in 1905.⁴⁸ Frederick Poth died soon afterward, ending the business relationship.⁴⁹

Wolf lent his designs to many breweries in Philadelphia. In addition to F.A. Poth, he also listed among his clients C. Schmidt and Sons, the Germania Brewery, the Bergner and Engel Brewing Company, John F. Betz and Son, Louis Bergdoll Co., and C. Schmidt and Sons. This lists reads like a “who’s-who” of Philadelphia brewers of the 19th century. Most of the biggest brewers in Pennsylvania were Wolf’s clients, and Wolf was very keen on leveraging this reputation. His clients came back again and again, showing that he became a trusted and reliable architect who was able to meet all of their needs. His distinctive style was a mark of his craft, and his trademarks can be seen in different forms on each of the buildings he designed. His style can best be described as “Rundbogenstil,” a specific German version of Romanesque Revival meaning “round arch.”⁵⁰

Rundbogenstil was inspired by traditional Germanic and Italianate architectural forms and characterized by round arches, elaborate brickwork, and extensive window and door detailing. It began in elite circles in Germany, where architects were increasingly inspired by the historic castles and cathedrals

⁴⁷ Residences for Poth and his family

⁴⁸ Otto C. Wolf, *Breweries and Allied or Auxiliary Buildings* (Philadelphia: Wolf, 1906)

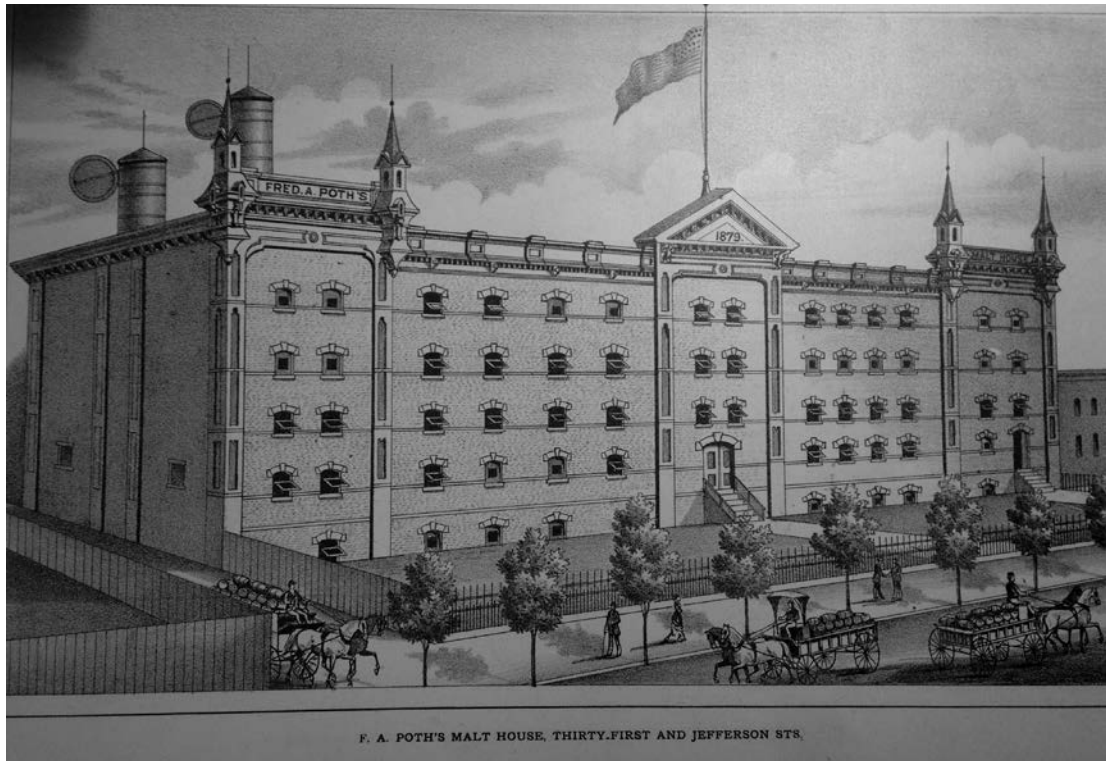
⁴⁹ Perhaps it was more than a business relationship; one of Frederick’s sons was named Otto. He died in childhood, but perhaps the name was a nod to Wolf, who was a close friend.

⁵⁰ Kathleen Curran, “The German Rundbogenstil and Reflections on the American Round-Arched Style,” *The Journal of the Society of Architectural Historians* 47 (1988): 351-373.

surrounding them. Thus, Rundbogenstil carries many elements of these grand Byzantine and medieval structures such as barrel-vaulted ceilings, arches, buttresses, spires, and domes. At the heart of Rundbogenstil as a movement was the idea of “progressive synthesis,” using a variety of eclectic architectural elements to create a modern, “daring” new kind of building.⁵¹ Like most architectural styles do, it arrived in the United States in a relatively distilled form. Much of the ideological weight was lost in translation, but German-American architects like Otto Wolf interpreted Rundbogenstil in their own way. They incorporated choice elements from the German style books: arched windows, ornate cornices, towers, and spires were common. Furthermore, industrial architects like Wolf translated the style from grand civic and religious buildings to breweries, grain elevators, and power plants. Rundbogenstil-inspired architecture was very popular with brewers who wanted to build the biggest “castle” in town in order to impress potential clients. The German immigrants who founded these companies, says historian Richard Wagner, “intended to build buildings that would last hundreds of years and become their legacies.”⁵²

⁵¹ Curran, *Rundbogenstil*

⁵² Greg Kitsock, “Old Breweries, New Beer Leading the Charge for Urban Renewal.” *All About Beer Magazine* (2003).



(Figure 1.3. *The malt house of the Poth Brewery as it appeared in the early 1880s. Its design exemplifies the eclectic nature of the Rundbogenstil style, with round arched windows, gothic-inspired spires, and Italianate cornices. This building was designed by Fred Wolf, Otto's mentor and a major influence.)*

Otto Wolf died on December 9, 1916 at his home in Overbrook, Pennsylvania. He was sixty years old. In his obituary, his cause of death is attributed to “overwork and a nervous collapse.”⁵³ Later in his life, he was very dedicated to philanthropy and helping the German community in Philadelphia. He is listed as a member of the American Institute of Architects, the Union League, and the University Club, the vice president of Northwestern National Bank, a trustee of the German Hospital, and a member of St. Paul's Lodge, A.M. of Mary Commandery, and the Lulu Temple.

⁵³ Obituary of Otto C. Wolf.

V. THE BREWERY AFTER F.A. POTH

Frederick A. Poth died in 1905, leaving the brewery, operating at peak capacity, to his four sons: Frederick J., William, Henry, and Frank. The first few years of their management passed without incident, but soon they would run into problems that seriously threatened their business—both from external and internal forces.

The biggest problem for the Poth Sons, of course, was the looming threat of Prohibition. When the Eighteenth Amendment and subsequent Volstead Act took effect in 1920, Philadelphia breweries looked for ways to weather the storm. They were allowed to remain open under the condition that they would no longer produce beer with an alcohol content over a certain percentage. Thus, the breweries turned to producing soft drinks or “near beer”—officially, anyway. In “secret,” the alcoholic beverage production continued at many breweries, including the Poth. Of course, it was impossible for such a large operation to remain functioning completely under the radar, so it is reasonable to assume that city officials simply turned a blind eye to what was happening in Brewerytown.

For nearly three years, the operations continued uninhibited. Then, on December 5, 1922, the federal government acted against the breweries.⁵⁴ Federal Prohibition Enforcement Agents in Washington, DC had received a tip that the breweries in Philadelphia were still “running wide open,” despite the law. For two

⁵⁴ “14 Breweries Here to be Seized by Federal Agents.” *Philadelphia Evening Bulletin*. Dec. 5, 1922.

weeks, they staged a covert operation in Brewerytown trying to gather hard evidence that they could use to prove their theory. That evidence came in the form of Elmer C. Phillips, a driver for the Poth Brothers who drove past the watch of Sol Grill, supervising enforcement agent and his associates. His truck was searched and was found to contain “six and one quarter barrels of beer and 240 pint bottles.” Phillips was held in the Federal Building on a bail of \$500 for the illegal transport of alcoholic beverages. For Sol Grill and the Federal Government, Phillips’ arrest gave them the evidence they needed to seize the Poth and the 13 other breweries still operating in Philadelphia.

That was only the beginning of the Federal Government’s attempted crackdown on the Poth Brewery. The saga would last for several more years, as is evidenced from an event that happened on July 11, 1924.⁵⁵ The Law Enforcement League, hearing reports that the Poth’s Camden branch was still in operation, sent Reuben R. Sams, divisional chief of the Prohibition Unit, to investigate. Although the brewery had been under orders to padlock all doors and cease operations, prohibition officials had observed “smoke pouring in heavy black clouds from the smokestacks... (betraying that) the machinery was in constant operation, and that two of the doors were not padlocked.” Furthermore, they observed “three trucks leave the brewery covered with tarpaulin, apparently heavily-loaded in the dead of night.” When confronted about this, Poth managers claimed that they were simply hauling away residue from the non-functioning tubs left at the site. Prohibition officials did not buy this explanation, however, and termed the brewery a “public

⁵⁵ “New Investigation of Poth’s Sought.” *Philadelphia Evening Bulletin*. July 11, 1924.

nuisance.” They ordered all liquors destroyed and placed signs on each of the doors that read “Closed for One Year for Violation of the National Prohibition Act by order of the United States District Court for the State of New Jersey.”

Meanwhile, the management of the brewery—and the Poth family— was falling apart from within. On October 24, 1922, an *Evening Bulletin* article reported on a feud among the Poth brothers regarding allegations of wasteful spending. Frank Poth wanted his brothers removed as trustees of the business because, the newspaper alleges, they wasted over \$1 million in undistributed profits. There were still another million dollars left to be distributed to shareholders and Frank Poth did not trust his brothers to handle the money responsibly. The conflict apparently did not have an easy resolution, as it was reported to be ongoing as late as 1929. By the 1930s, however, the president of the company is listed as Fred J. Poth, not Frank. As the Poth brothers fought over their father’s will, the company he founded grew deeper and deeper in debt.

In 1926, The U.S. Attorney General, looking for new ways to crack down on illegal liquor, sued five breweries to recover taxes and penalties totaling \$149,324.⁵⁶ One of the breweries hit in this lawsuit was Poth and Sons and their subsidiary, Cereal Products, Co. Their portion of the suit totaled \$97,217, levied against them for the charge of “manufacturing illegally...the high-power beverage” and for evading previous taxes imposed on their operation.

⁵⁶ , On December 23, 1926, the *Evening Bulletin* published an article entitled “5 Civil Suits Filed Against Breweries.”

On October 26, 1932, the main brewery at 31st and Jefferson had once again been “seized by dry agents.”⁵⁷ These agents alleged that “high-powered beer had been manufactured there.” The site had been operating under the name Cereal Products, Co. in an attempt to deflect federal attention from its activities. However, prohibition agents once against seized “truck loads of beer from 3% to 5% alcoholic content as they emerged from the place.” After the seizure, U.S. Attorney Coles recommended that the plant be libeled and begin injunction procedures to “padlock the establishment.”

The brewery barely survived Prohibition, but allegations of corruption plagued the surviving brothers well into the 1930s. On May 29, 1936, the brewery declared bankruptcy⁵⁸. In March of 1937, another lawsuit was brought against three “former officers” of Poth and Son’s, alleging that they misled shareholders into purchasing company stock by intentionally filing a “false prospectus” that made the company’s financial situation look much better than it really was. The three men charged were “Fred J. Poth, president of the company, John W. Lee, Secretary, and Henry W. Donaghy, Treasurer.”

Meanwhile, however, the Poth brothers attempted to keep their industry alive in any way possible despite the setbacks they faced. Every brewery in Philadelphia suffered in some way during the long years of Prohibition, even ones that had once been among the largest in the nation. In 1935, Fred J. Poth partnered

⁵⁷ *Philadelphia Inquirer*

⁵⁸ The *Evening Bulletin* on that day reported that “bankruptcy proceedings were filed today in U.S. District Court against F.A. Poth and Sons, Inc... by three creditors with claims totaling \$4,764.20.... the brewery is insolvent and has not been able to satisfy two small judgments obtained by other creditors.”

with A.C. Gruenwald, who had operated the Premier Cereal Beverage Company during Prohibition. Gruenwald had built the first new brewery after the 21st Amendment was passed, but his company soon declared insolvency and folded. During his partnership with F.J. Poth, they purchased the former Class and Nachod Brewery in North Philadelphia and put Poth beer back on the market in October of 1935.⁵⁹ A new bottling facility was opened a year later, and a collaboration with former Bergner and Engel trustees was formed. The new incarnation of the Poth Brewery produced beer under brand names from other former breweries—including Bergner and Engel's Black Eagle Beer and Betz' Old German brand.⁶⁰ In 1937, F.J. Poth became plant superintendent of the Otto Erlanger Brewing Company, which produced Erlanger Beer and Perone, advertised as the "first Italian-style lager beer in America."⁶¹ None of these combined enterprises ended up being very profitable, however, and by the 1940s, supply rations and shortages as a result of the war made staying in business nearly impossible.

Until the 1950s, the 31st and Jefferson site was still owned by the "Estate of Frederick A. Poth." They were then sold to a commercial developer. Many of the buildings that had formerly existed at the site were demolished by 1942. The remaining buildings at time of sale were being used as warehouses, administered by Provident Trust for the estate of F.A. Poth. Tenants included Dubonnet Corp., a wine firm, Frigidaire Sales Corp., and General Storage Co. During the 1950s and 60s, the

⁵⁹ "Brewery is Conveyed at 10th and Montgomery." *Philadelphia Evening Bulletin*, July 16, 1937

⁶⁰ "Philadelphia Beer," 105.

⁶¹ *Ibid*, 107.

main building was used for civil defense supply storage. Alterations were made during this period, including reinforcing some of the walls to help withstand a nuclear attack.⁶² By the 1980s, the structure was owned by the Robbins Family, who operated a small business there.⁶³ In the early 1990s, the Red Bell Brewing Company opened at the site. It went out of business in 2002, but its sign and many other relics of its occupation of the building are still present at the complex today.

⁶² Rich Wagner, *Brewery Tour of Philadelphia* (1987)

⁶³ Source does not specify what kind of business.

CHAPTER 2. THE BREWERY, ITS FUNCTIONS, AND EVOLUTION

I. SITE EVOLUTION- OVERVIEW

The Poth Brewery complex was in operation for over 60 years, and over that time the layout and appearance of the many buildings on the site changed dramatically. A series of insurance surveys taken throughout the last quarter of the 19th century help to illustrate the evolution of the site from its earliest days.⁶⁴ Furthermore, the 1910 Philadelphia Atlas and 1942 and 1962 Works Progress Administration surveys help document the changes made to the complex after F.A. Poth's death and the decline of the company.

The brewery complex itself was originally situated in the two blocks between 31st Street to the east and 32nd Street/Glenwood Avenue to the west—where 32nd Street turns into the diagonal Glenwood Avenue and forms a triangular-shaped lot before intersecting with Oxford Street. Jefferson Street divides the two blocks, and in the earliest years of the site, served as its southern boundary. In later years, however, the brewery expanded to the south side of Jefferson Street. Eventually, the unusual triangular block north of Jefferson Street would shape of the site's distinctive stables, which are still extant.

⁶⁴ These surveys were taken in 1873, 1875, 1880, 1884, 1890, and 1894

The brewery grew throughout the 1880s and 1890s, reaching its peak size and extent in the late 1890s after 5 years of remodeling and construction projects. Otto C. Wolf designed most of these buildings, and they are listed in quick succession in his project book “Plans and Specifications.” Between 1890 and 1894 the brewery drastically changed in shape and scale, suggesting an almost complete replacement of former buildings. In 1910, the site remained at much the same extent as it was in the 1890s. By 1942, however, the ravages of prohibition and the Great Depression had taken their toll on the brewery and the surrounding neighborhood. Nearly all of the buildings south of Jefferson Street had been demolished, leaving a vacant lot. The surviving buildings were being used as warehouses.

The following sections explain in further detail the evolution of the site. Before exploring the story, however, readers will benefit from some background on the basic technical processes used in the brewery so that terminology used in describing the different buildings’ functions can be readily understood.

II. 19TH CENTURY BREWING PROCESSES: AN OVERVIEW

Like many industrial structures of the era, late 19th century breweries were built to perform as “master machines” with their design and structure aimed at creating the most efficient possible spaces for production.⁶⁵ Manufacturing involved both workers and machines, both of which put different kinds of stresses on

⁶⁵ Betsy Hunter Bradley, *The Works: The Industrial Architecture of the United States* (Oxford University Press, 1998), 28.

industrial buildings and required different accommodations. Machines grew larger and more powerful as new technologies made production faster more prolific. They were often very heavy and constantly in motion, creating vibrations that put physical stresses on the buildings that housed them. Sturdy framing and heavy-duty materials were needed to withstand these stresses. At the same time as machines got bigger, manpower was often transferred to other tasks, with employees operating machines rather than physically creating a product by hand. In many late 19th century factories, the layout of manufacturing spaces was determined by the largest area that could be supervised by a single foreman.⁶⁶ Still, physical labor was necessary in many types of industries. In breweries, while the Saladin System eliminated the need for workers to turn malting barley on a regular basis, manual labor was still needed in areas such as barrel cleaning, malt transport, and keeping the boilers at full power. As machines helped to increase production in late 19th century breweries, the number of workers needed increased. In its earliest years, the Poth Brewery employed just 20-30 workers, depending on the season. By 1900, that number increased nearly five-fold to 100 workers year-round.⁶⁷

The different functions of the buildings of the Poth Brewery cannot be understood without a basic understanding of the different processes involved in brewing lager beer. The two basic ingredients for any beer are water and a fermentable starch—most commonly barley. This mixture is then fermented using yeast and flavored with hops—giving the final product a bitter, tangy flavor. Malting

⁶⁶ Bradley, *The Works*, 26.

⁶⁷ *One Hundred Years of Brewing*

is the first step in the brewing process. Raw cereal grains are made to germinate by soaking in water, and are then halted from germinating further by drying with hot air.⁶⁸ This process is done in a malt house. Traditionally these spaces were quite small, integrated into the larger brewery that surrounded them. By the end of the 19th century, however, they became separate buildings as the size of brewery complexes drastically increased with the industrialization of the process. The space, whether large or small, served the same basic functions in every iteration, however.

First, the grain was soaked in a large pit or cistern full of water until it increased in size by nearly 25%. The barley was then transferred to a device called a couch, where the germination process began. After one to two days, the germinating grain was spread out in an even layer on a malting floor—or, in more technologically-advanced breweries—a Saladin box.⁶⁹ In order to prevent the barley from tangling together into impenetrable mats and to ensure even growth, it had to be turned on a regular basis. In early breweries, this was done by hand, but by the end of the 19th century, it had become mechanized through the inventions of Charles Saladin and other brewery pioneers. The germination process was halted before the stem of the grain burst through its husk—usually after around 5 days. At this point, much of the starch in the barley had been replaced by maltrose, a form of glucose, giving it a sweet flavor.⁷⁰ After the grain was removed from the malting floor, it went to the kiln, a different part of the brewing complex. Here, hot air fanned by large furnaces at varying temperatures halted the germination process and began to

⁶⁸ Downard, *Dictionary*, 115. “Malting.”

⁶⁹ Downard, *Dictionary*, 77. “Floor-Malting.”

⁷⁰ *Ibid*, 115.

dry out the malted barley.⁷¹ The amount of time that the grain spent in the kiln depended on what kind of malt was needed and the color desired of the finished product. After being removed from the kiln, the malt often spent months in storage to help intensify its flavor. Thus, large spaces devoted to storing malt were necessary in 19th century breweries. Generally, the greater the space devoted to storage, the greater the output of the brewery. Once the malting process was finished, the malt was ready for use in brewing. After this process, the malted barley was generally sent to either a different building or a different section of the same building—known as a “brew house” or simply a “brewery.”⁷² Thus, the term “brewery” can refer to the complex of buildings as a whole—all the structures and associated technologies needed in the production of beer—or the specific building or room where the brewing process takes place. For clarifying purposes, I will try to distinguish the two by referring to the latter as a “brew house” unless otherwise labeled by primary sources.

After the malted barley was transferred to the brew house or similar space, the next step in the process was milling. This was done in a device called a malt mill. This was generally located in a separate section of the brew house, but in very large breweries, the malt mill was its own building. The malted barley needed to be crushed to expose the starches inside. This process made it easier to extract the desirable sugars during the mashing process. During the mashing process, the grain was converted from its malted state into simple sugars that could be used in the

⁷¹ Ibid, 104. “Kilning.”

⁷² Downard, *Dictionary*, 34-35. “Brewing Process.”

fermentation process. The malt was mixed with hot water in a large vessel called a mash tun. (Also referred to as a “mash tub” in various sources).⁷³ This process resulted in a sugary liquid called “wort.” This liquid was then strained through the bottom of the tun in a process called lautering, wherein the wort was separated from any residual grain.

The filtered wort was then moved to a large copper tank—often known as a kettle or simply a “copper,” where it was boiled with hops and other ingredients to add flavor. After this process, the mixture had to be cooled to a low enough temperature to ensure the survival of yeast, which was added after the cooled wort passed into a container called a fermenter. When yeast was added to the wort, the fermentation process began, turning the mixture into alcohol. In larger breweries such as the Poth operation, there were separate rooms and even buildings specifically set aside for the fermentation process. After the beer was properly fermented, it was normally aged for several weeks to several months to achieve an ideal texture, color, and flavor. After it reached this ideal combination, it was bottled or stored in barrels, leading to the measurement of brewery output being in “barrels per annum.” At its peak, the Poth Brewery produced over 180,000 barrels a year.⁷⁴ Therefore, large spaces for barrel storage were needed, as well as facilities for bottling and washing used barrels.

In addition to the many functions associated with the actual brewing process, a large 19th-century brewery required structures for other auxiliary functions, most

⁷³ Ibid, 116. “Mash Tun.”

⁷⁴ *One Hundred Years of Brewing*, 201.

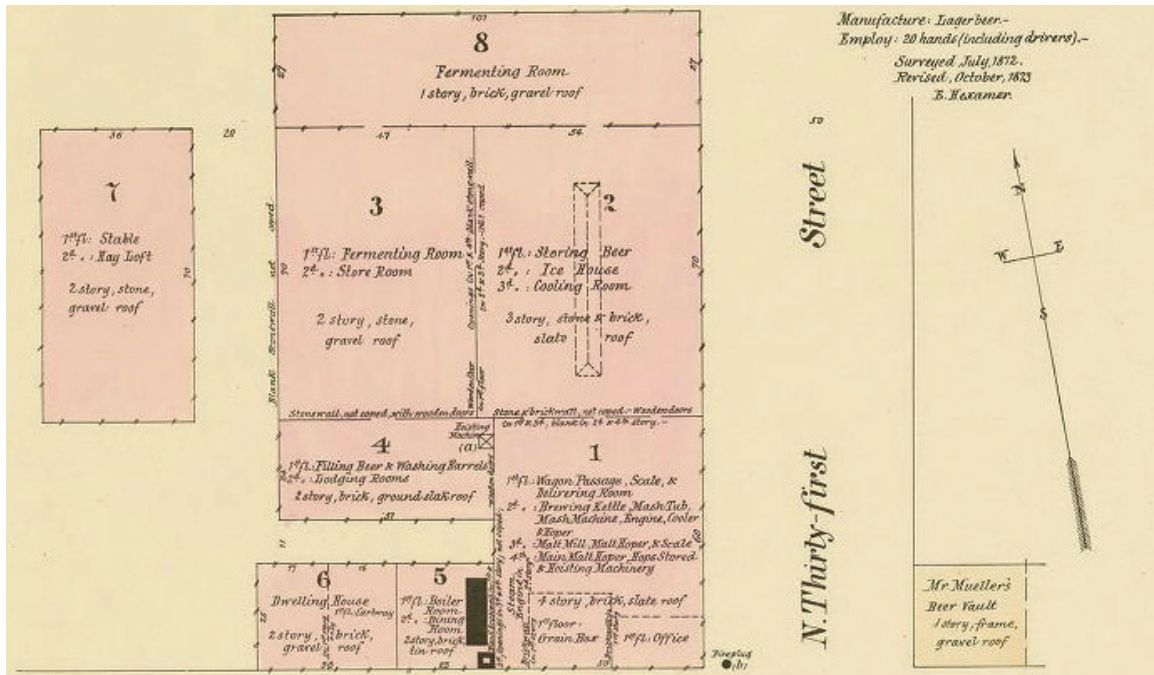
importantly a stable. All supplies were transported either by train or by horse-powered vehicles. Most large Philadelphia breweries were connected to rail lines, but for the work that the trains couldn't do, there were horses and carriages. Of course, horses need a constant food source, so a hayloft would have to be an essential part of any stable.

Now that I have described the basic brewing process, I will detail how the Poth Brewery site and each of its buildings specifically functioned as part of this process through the years of its operation.

III. SITE EVOLUTION- 1873-1890

The 1873 Hexamer fire insurance survey was the first such record to show the Poth Brewery in its first years of operation. It illustrates that the brewery occupied the triangle-shaped block north of Jefferson Street, between 31st Street to the east and the diagonal Glenwood Street to the west. There were two main building clusters on the site at this time: one used for all the brewing operations and the other, approximately 20 feet away, as a stable and hay loft. The two-story stable measured 36 by 70 feet, while the main brewing complex has a 157-foot frontage on 31st Street and 106 feet on Jefferson Street. The main brewery complex can be effectively understood as multiple buildings attached to each other, allowing for passage between them. It has the form of a central core that has been added to over time through accretion. Each of the sections has a different function, and therefore act independently, yet are indispensable to the operation of the brewery as a whole.

Thus, each section will be referred to as if it were a separate building. These different buildings are represented by the numbers 1-7; the separate stable building is number 8.



(Figure 2.1. The site as it looked in 1873. Hexamer General Surveys, Volume 7. Plate 601.)

Building 1 was 50 feet by 60 feet, 4 stories tall, made of brick and located closest to the corner of 31st and Jefferson Streets. The main section of the first floor was used as a wagon passage, scale, and delivery room. Also on the first floor was a grain box and the company offices, located at a prominent position facing the street at the corner of Jefferson and 31st Streets. It can be assumed that this office was the early brewery's main public front.

The brewing process most likely began on the third and fourth floors of this building. On the third floor were essential functions of the malting process: the malt mill, malt hopper (which held the malted barley and controlled its flow into the

mash tun on the floors below), and scale. The fourth floor contained hops storage, hoisting machinery, and the main malt hopper. When the malting process was complete, the malted grain would proceed to the second floor, which contained the brewing kettle, mash tun, mash machine, engine, and cooler. These were essential pieces of equipment to the operation of the brewery, involved in the mashing process, which converted the malted barley into wort.

Building 2: This was a 54'x70' three-story stone and brick building directly to the north of building 1. Its first floor was used as beer storage, the second floor was used as an ice house, and the third floor was used for cooling—presumably cooling wort to prepare it for fermentation. This floor was topped by a ventilator shaft.

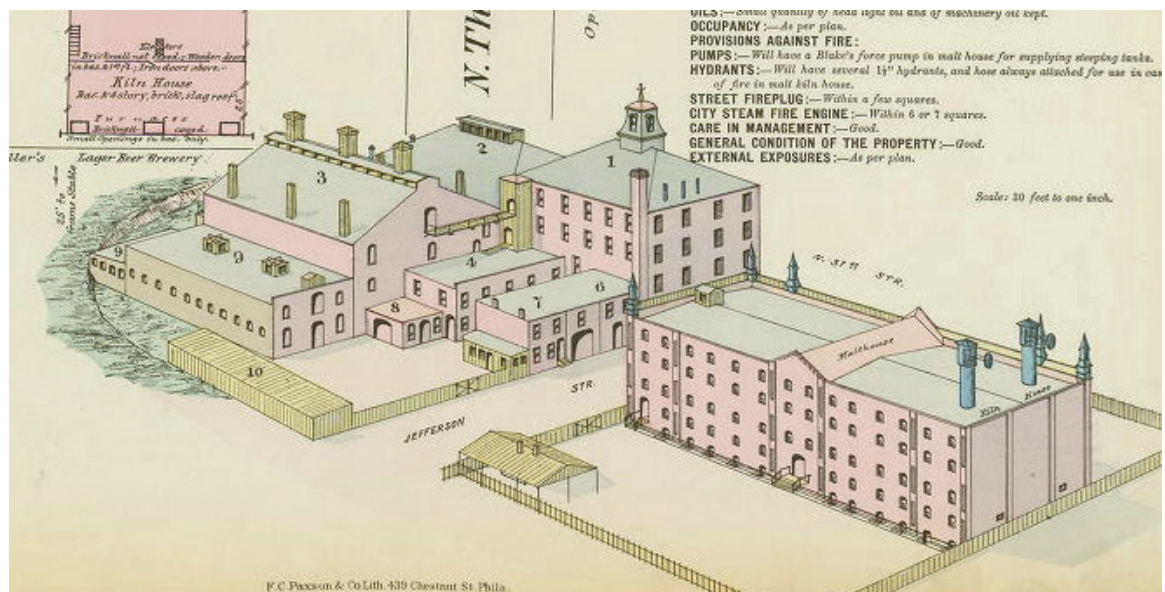
Building 3: This two-story 47'x70' stone building was located directly to the west of Building 2. Its first floor was used as a fermenting room—in which cooled wort was mixed with yeast in large containers. The second floor was used for storage. Another fermenting area—labeled as Number 8 on the map—was only one-story tall, made of brick, and located at the back of the brewing complex.

Building 4: This two-story 24'x57' brick building was used mainly for the packaging and storage process: the first floor was used for washing and filling barrels. This building was also where the elevator—or “hoisting machine”—was located, which transported supplies and barrels to higher floors. The operations in this building represented the end of the brewing process. It opened to a narrow exterior

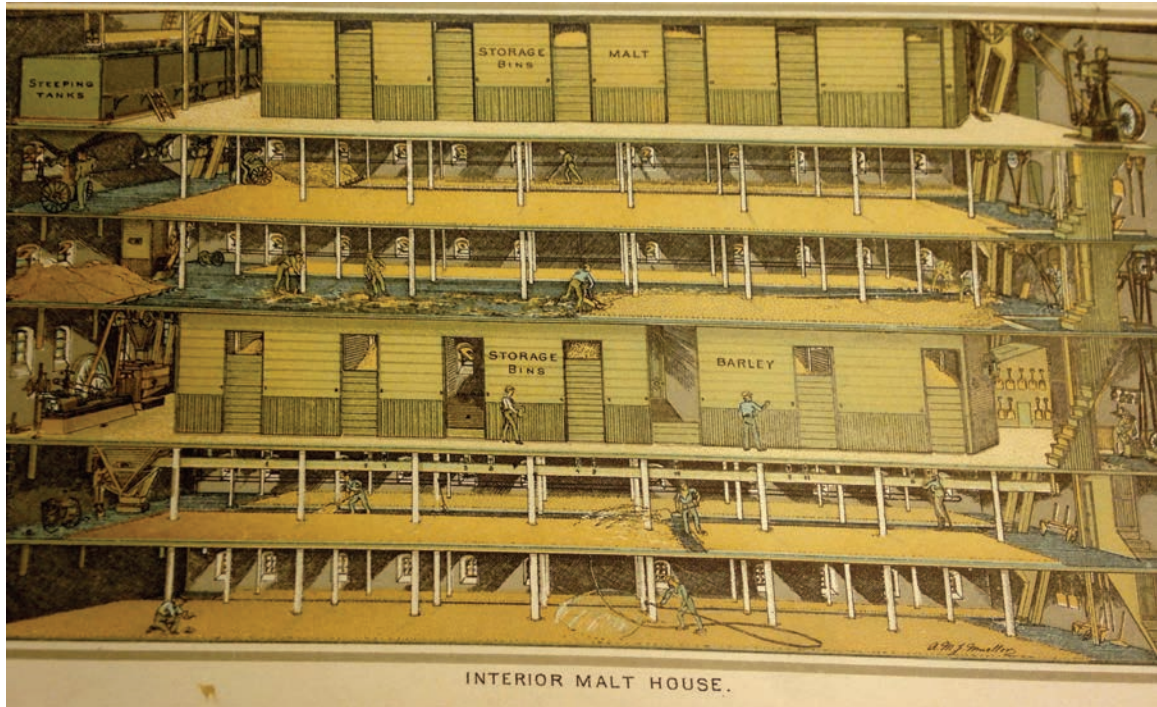
passageway that led to a large open yard near the stables. Presumably this area was used for loading wagons and/or train cars to transport the final product elsewhere. Notably, the second story of the building was used as lodging. The insurance survey notes that “hands employed [live] on the premises” on the second story of No. 4. No mention is made of how many people were living there, nor whether this number accounted for all of the employees working in the brewery at that time. It does prove, however, that Poth provided housing for his workers.

Buildings 5 and 6: The 23’x25’ Building 5 was attached to Building 1 and fronted on Jefferson Street. Its first floor was used as a boiler room, which provided steam power to operate the rest of the brewery’s functions. This is where the original smokestack of the brewery was located. The second floor was used as a dining room, presumably for the brewery workers. Building 6 was labeled as a 2-story “dwelling house” and appears to consist of two rowhouses combined. (Did Poth live here before his house in West Philadelphia was built?) A cartway ran through the first floor of this building.

Building 7: Building 7 was located around 20 feet to the west of the other buildings. It consisted of a two-story stone stable and hay loft. By 1875, this building had been connected to the others by a three-story storage room and ice house.



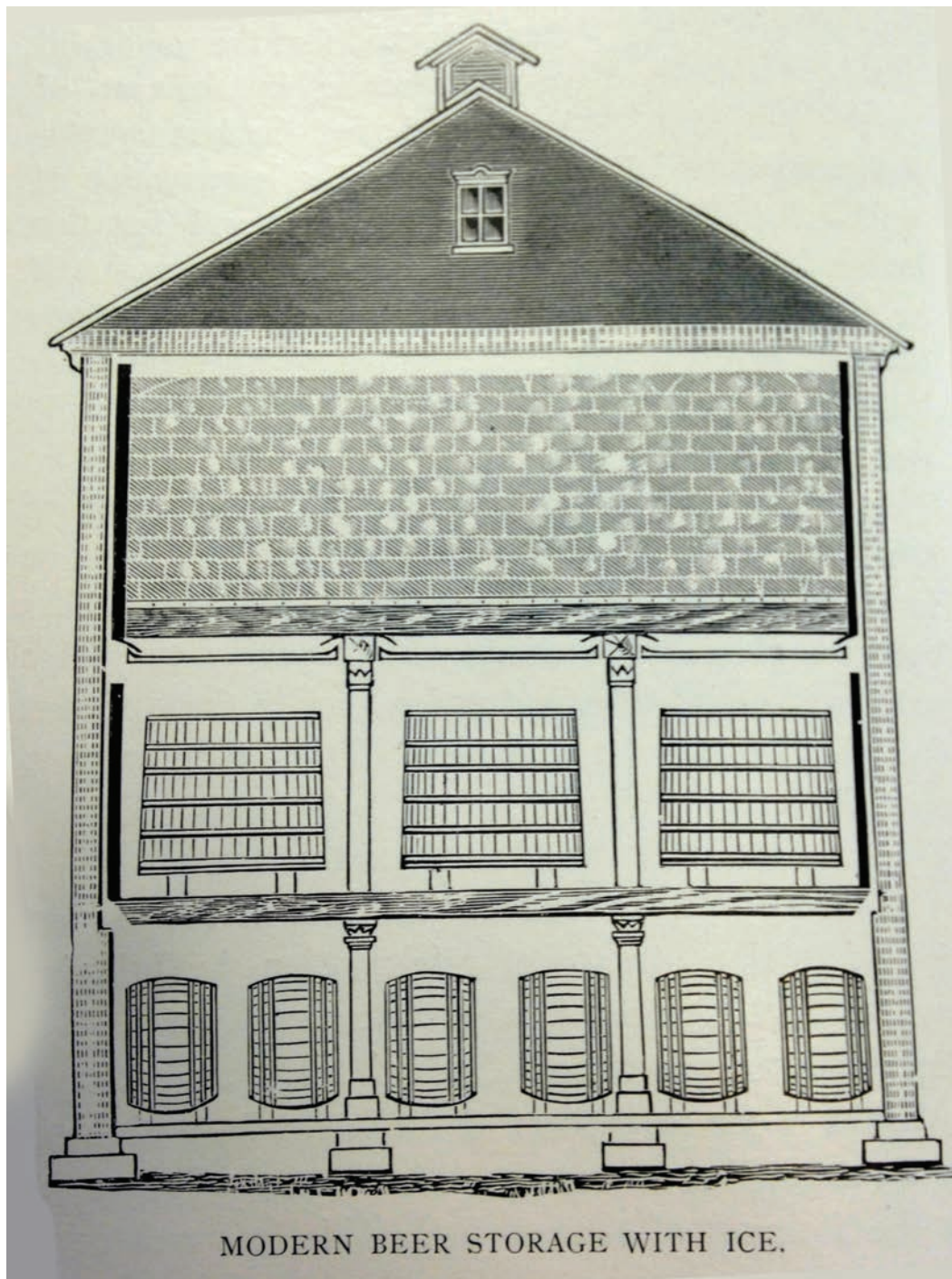
By 1880, the brewery had expanded significantly. By this time, it was employing around 30 men. It acquired a lot on the south side of Jefferson Street and built a separate brick malt house in 1879. By separating the malting process from the rest of the brewery, Poth proved that he had the resources to keep up with changing technologies and practices. The 60'x125' malt house had four floors plus two sub-basements. The two basements were used as malt floors, while the first floor was used for malt and grain storage. The pattern was repeated on the upper floors, with the second and third floors being used as malt floors and the fourth floor used for storage. The survey notes the presence of "patent self-acting machinery for turning the malt." This advancement in technology cut down on labor needed to operate the malt house. A kiln house was located at the south end of the building, complete with three furnaces and two elevators. Also on the south side of Jefferson Street, a barrel preparing shed with pitching furnaces was constructed.



(Figure 2.3. *An interior view of the Poth malt house as it stood from approximately 1879 to 1892. From “A Souvenir Album of F.A. Poth Brewing Company,” 1890. Illustration by A.M.J Mueller.*

The malt mill, however, was still located in the main brewery building complex north of Jefferson Street. Most of the functions of the buildings on the north side of the street remained the same, with the exception of malt house functions, which were moved to the main malt house across the street. An illustration shows that an exterior walkway connected the brewery building with the beer storage building. The stable building was connected to the rest of the buildings by a 3-story beer storage room and ice house, and then expanded toward the back of the lot. Also in this addition was a one-story brick 16'x16' square taproom used for providing samples to the public. A kitchen was added to the “dwelling space” and that building was divided into two sections—one listed as a “dwelling,” the other as “lodging.” Considering the long hours worked by brewery workers of the day, this space was

most likely used for brewery employees who needed somewhere to stay after working long into the night.



(Figure 2.4. An illustration of a beer storage room looking much like the one in the Poth Brewery. Blocks of ice are kept on the 3rd floor and barrels of beer are stored on the lower floors. From "One Hundred Years of Brewing," 1903.)

The 1880 iteration of the brewery shows a company that has expanded in size and production, requiring new buildings and more space for storage. As it turns out, however, it was not entirely up to certain safety standards. In 1882, the E. Hexamer Fire Insurance Company issued a citation to the F.A. Poth Company, as well as other breweries in Philadelphia. Their report concerned malt mills, which were used for processing malted grain in preparation for fermentation. In it, they described the “ideal” contemporary malt mill and gave a list of safety recommendations. One of the main recommendations was that “the mill should be situated outside of the main brewery (brew house), in a separate building.”⁷⁵ On this count, the Poth brewery already failed, as its malt mill was located in the same building as its brew house.

The Hexamer survey goes on to describe further recommendations: the grain must be thoroughly cleaned before entering the mill, and must be free of all iron particles. These iron particles could easily cause sparks under the right circumstances, which led to many fires and explosions in malt mills. To further reduce the risk of fire, he recommends the use of gearing, rather than friction rollers during the milling process. Gearing rollers were machine-operated, running under their own power, while the latter operated solely from the force of friction, leading to a greater risk of fire. Furthermore, the use of enclosed lighting, rather than candles or oil lamps, was recommended for night work. Finally, all spaces in and around the

⁷⁵ E. Hexamer, *Report on Malt Mills of the Breweries and Malt Houses of Philadelphia, Prepared for a Committee of Philadelphia Fire Underwriters*. (Hexamer, 1882)

malt mill needed to be properly insulated and enclosed so that, should a fire start, it would not spread throughout the building.

On each of these points, the F.A. Poth brewery failed the test. Not only was their malt mill in the main brewing building, they did not use magnets to remove iron particles, used friction rollers, and lit their mill with candles. In fact, there were ten different categories of safety precautions and the brewery violated every single one of them. This forced them to pay higher insurance premiums. This is not an indictment of the Poth brewery, however. It was far from the only brewery in Philadelphia to fall short of these standards, and before publication of the survey in 1882, these recommendations had not previously been fully articulated to brewery owners. For example, the Bergdoll Brewery, one of the largest breweries in Philadelphia, also had multiple violations for having the malt mill in their main brewery building, for using friction rollers, and for using an open flame for lighting. The Bergner and Engel Brewing Company, the largest brewery in Philadelphia and a neighbor to the Poth brewery, had the fewest violations of any of the breweries surveyed, but even they had some minor problems, such as using open gas lighting.

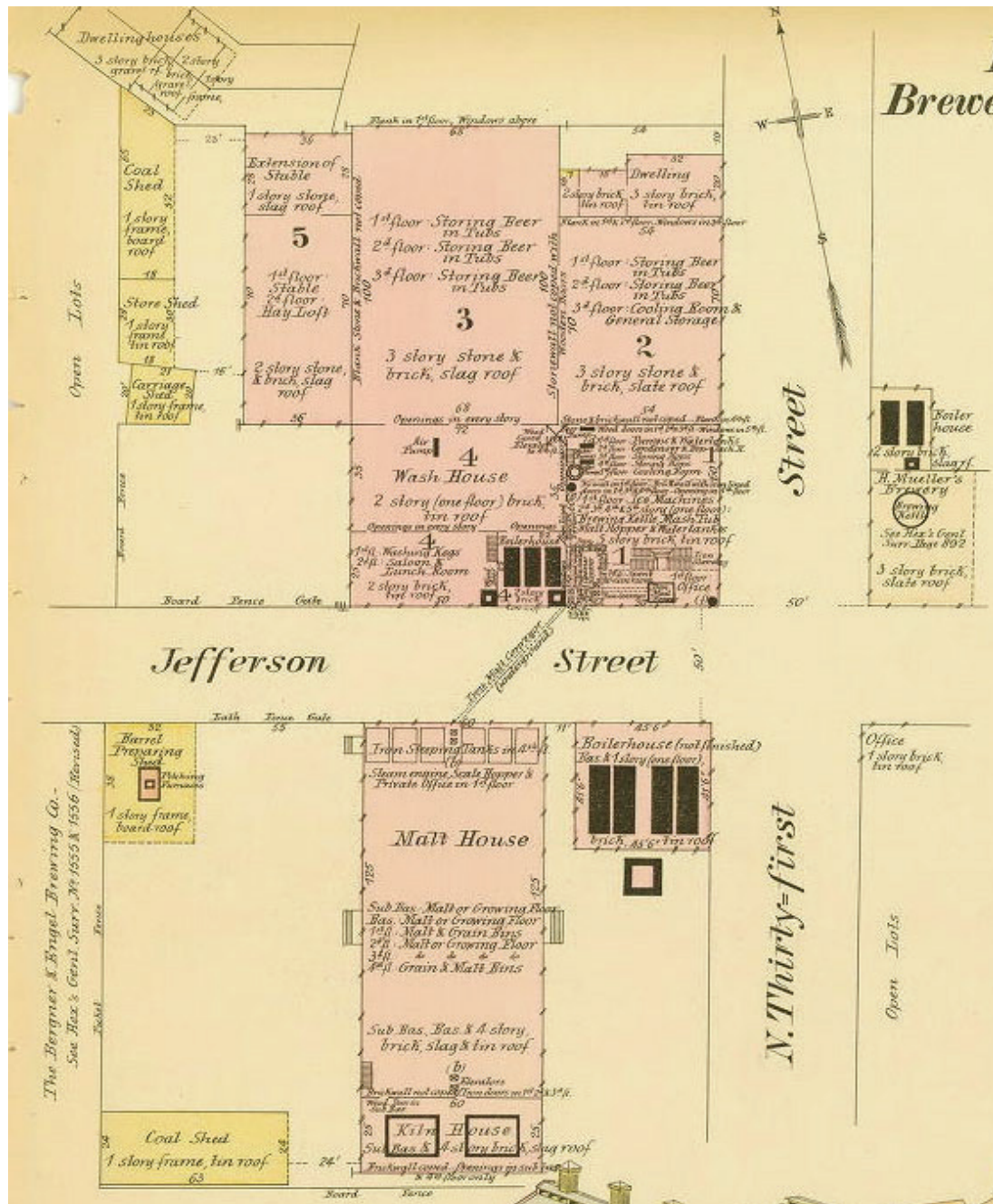
It seems that the damning malt mill safety survey had an impact on the management of the Poth Brewery, as it was noted that the violations were acknowledged and they had plans to “erect a new and improved mill outside of the main brewery.” By 1884, however, they had not done so. In that year, a regular Hexamer insurance survey noted that the malt mill was still located on the second floor of the main brewery building. Despite this, they had by this time corrected some of the other safety violations. For example, they began using a powerful

magnet to remove flammable iron particles from their malt, as per the recommendations.

Between 1880 and 1884, more alterations were made to the complex. The main section of the brewery building and the wash house were rebuilt in 1883 and a new one-story brick boiler house was being constructed on the south side of Jefferson Street next to the malt house. This boiler house was the first project that Otto C. Wolf designed for F.A. Poth, and only Wolf's fifth listed project overall. At this time, Wolf was just starting out as an architect in Philadelphia and securing a commission from Poth was certainly a major achievement in advancing his career.

By 1884, the space formerly used as a "dwelling" and kitchen had been removed and replaced with an expanded washing room on the first floor and a saloon and lunch room on the second floor. 30-35 people were employed during the summer and 22 were employed during the winter, so they needed a place to take breaks and rest. It was common practice at the time to provide brewery workers with a daily allotment of beer, so presumably the saloon/lunch room area was intended for that purpose. The fermenting room at the north end of the brewery complex and a portion of the former storage and cooling building were also removed. A new "dwelling" area was constructed in place of the latter. The small taproom was removed and replaced with an expanded storage facility. The company offices were still located on the first floor of the brewery building, however. There was an iron malt conveyer belt installed underground, running between the malthouse and the brewery. The malthouse generally retained the same setup and technology as it had had beginning in 1879, but the three smaller furnances in the

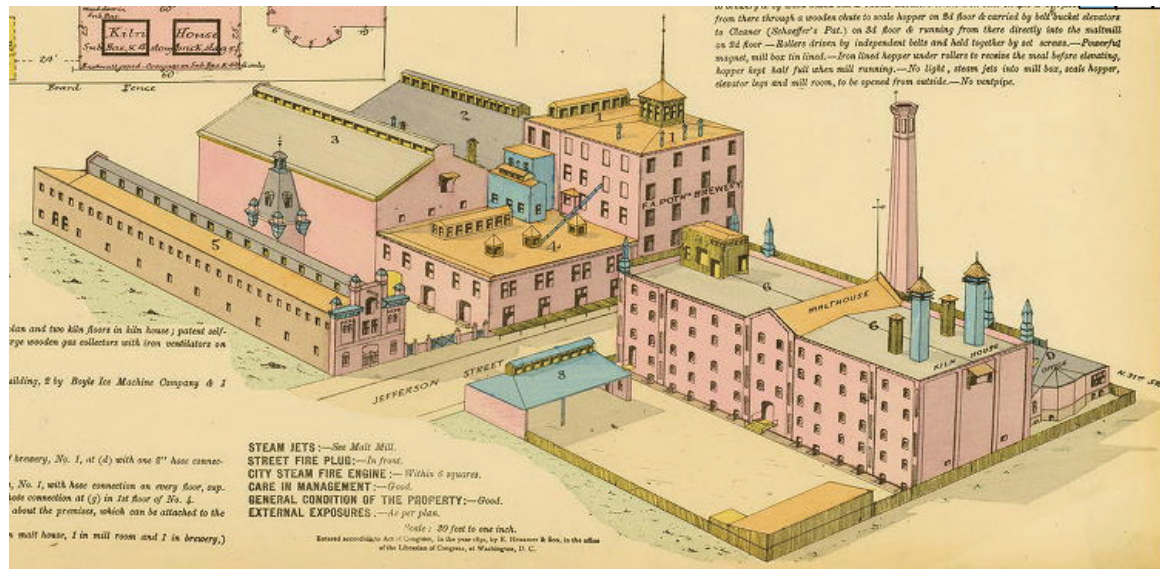
kiln house were replaced by two large ones. Crude wooden sheds for coal and carriage storage were erected around the premises, showing that even through all the expansions, more room was still needed.



(Figure 2.5. The brewery complex as it looked in 1884, showing alterations to the brewery and new boiler house and smokestack. From Hexamer General Surveys, Volume 19, Plate 1817.)

IV. SITE EVOLUTION- 1890-1905

The 1890s brought many changes to the brewery. Several major construction projects were undertaken during this decade, giving the site the shape and character it has today. Most of these new buildings were designed by Otto C. Wolf.



(Figure 2.6. The site as it appeared in 1890. Hexamer General Surveys, Volume 24, Plate 2348.)

In 1889, a new office building was constructed in the block south of Jefferson Street, next to the malt house. The Otto Wolf-designed office was located at the corner of Master and 31st Streets and was elaborately decorated to give a luxurious and genteel public front to the company. It included a beer stube for customers to sample some of their popular products, such as their famous “Tivoli Export” beer.

By 1890, the brewery employed 60 workers in the summer and 70 in the winter—twice as many as just a decade prior. Production was up to 100,838 barrels

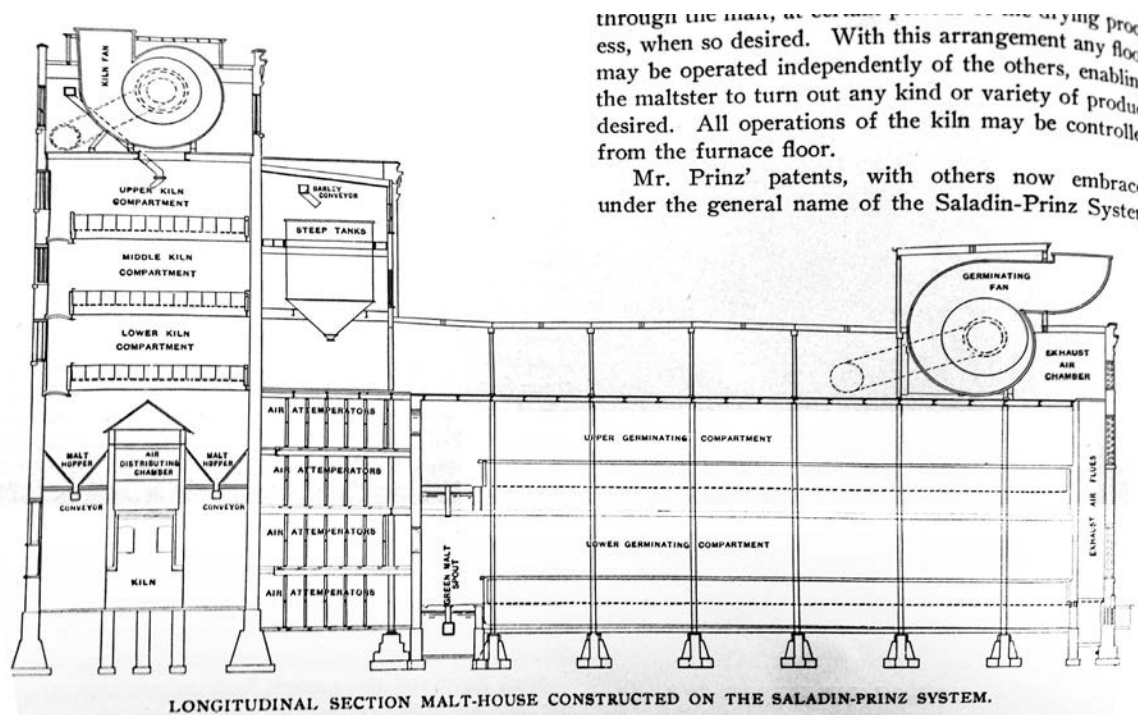
a year in 1890; it is clear why such an increase in labor was needed. Because of the increase in output a new shipping department was designated and a new pitching shed—used for packaging lager beer for transport—was constructed in 1887. Another very notable feature was the large stable and tower built on the west side of the property in 1886. This stable was three stories tall and measured 32'x175'. Despite its prominence and elaborate architecture, it would only last a few years before it was replaced with something new. Perhaps the most prominent landmark on the site was the 135 foot tall smokestack that marked the location of the boiler house, and, after the new office was built, pointed the way to the corporation's public front.



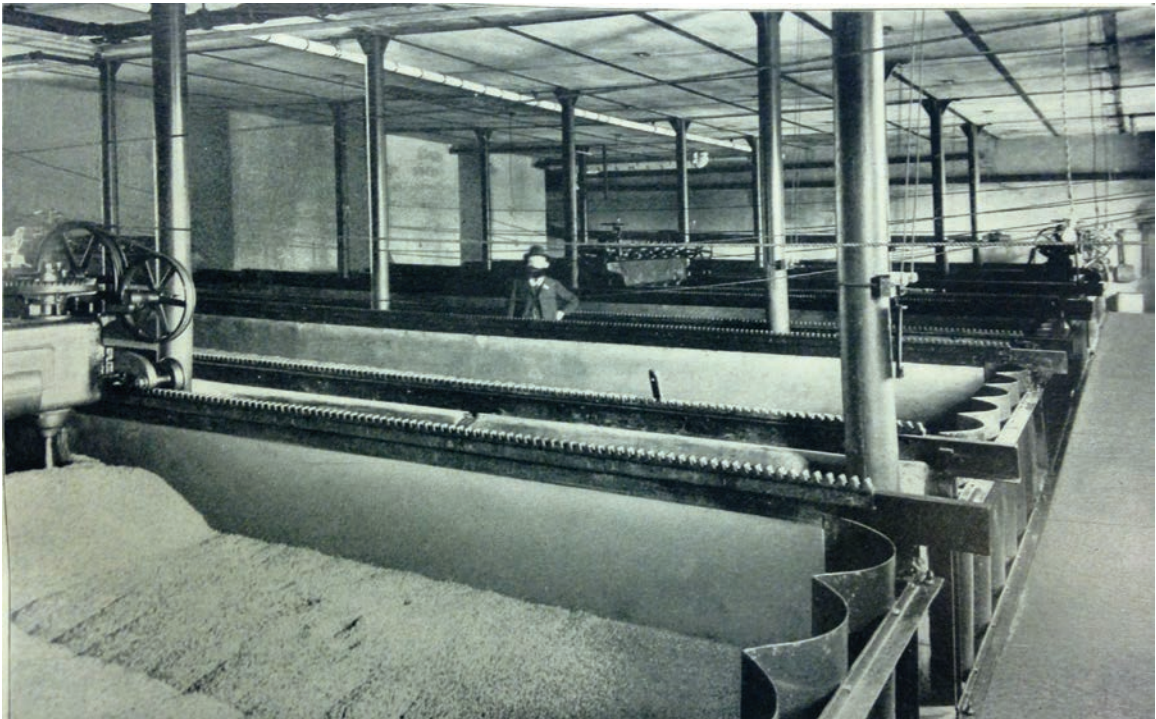
(Figure 2.7. An illustration of the brewery as it looked around 1890. From "A Souvenir Album of F.A. Poth Brewing Company," 1890. Illustration by A.M.J Mueller.)

Keeping safety in mind, Poth took many precautions with his malt mill. Even though it was still located in the main brewery building, it was housed in a fireproof room with brick arched ceilings. All of the machinery was lined with a fireproof material. The brewery would not keep this form for long, however. By 1894, nearly every single building on the site had been replaced or renovated. One of the most significant factors that led to these renovations was new technology. Being one of the largest and most influential breweries in Philadelphia, Poth (now Poth and Sons) needed to keep up with every latest advancement to remain on top of the market. Production was now over 150,000 barrels a year and 100 workers were employed at the company. The desire to remain at the cutting edge of technology manifested most prominently in the physical fabric with the construction of a brand new malt house and brewery buildings.

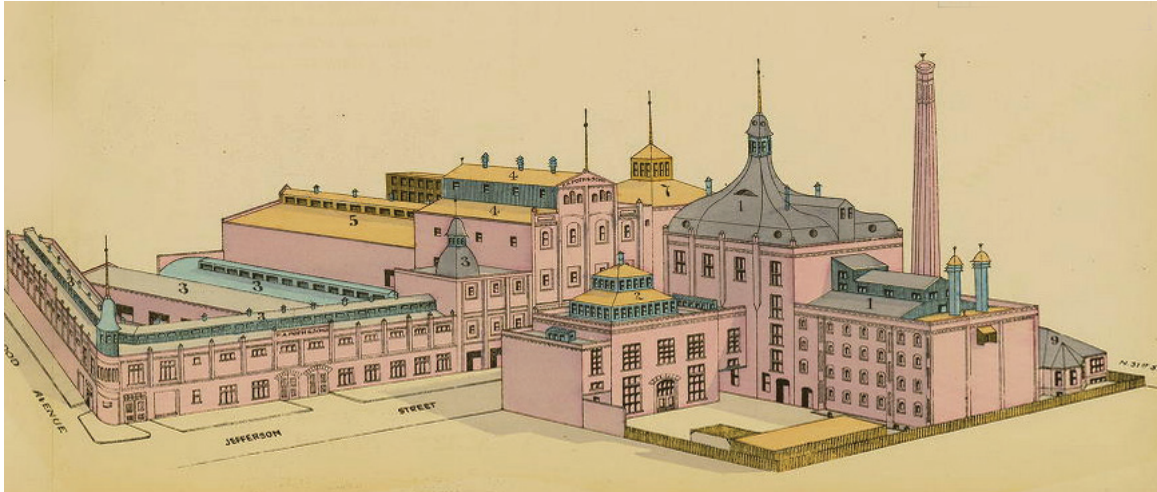
The new malt house was built in accordance with the Saladin system. This system of turning germinating malt more efficiently was developed by Charles Saladin of France in the 1880s and introduced to the United States by Louis C. Huck in 1887. As a brand new system, it required a major overhaul of malt house architecture. As seen in the following diagram, an entire two floors were devoted to the large, mechanized germinating compartments, or “Saladin boxes.” In these boxes, the germinating barley was turned by a series of mechanized screws and ventilated by an enormous fan.



(Figure 2.8. A longitudinal section of an ideal malt house built on the Saladin system and representing what the Poth malt house may have looked like around 1900. From "One Hundred Years of Brewing," 1903.)



(Figure 2.9. A photograph of the interior of a malt house built in the Saladin system and representing what the Poth malt house may have looked like around 1900. From "One Hundred Years of Brewing," 1903.)

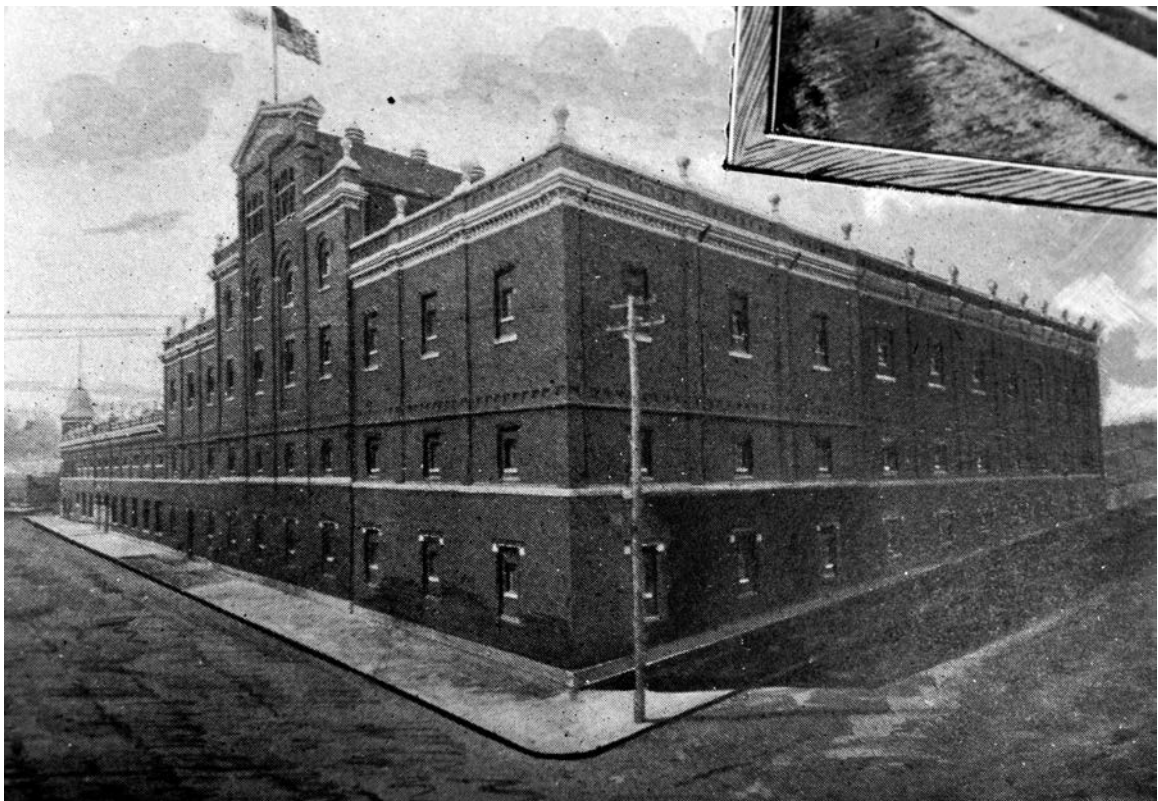


(Figure 2.10. The site as it appeared in 1894. Hexamer General Surveys, Volume 28, Plates 2751-2752.)

The new malt house at the Poth brewery was consistent with the Saladin System, but not exactly like the models. Its structure mirrored that of the ideal Saladin malt house, with “malt bins” taking up two whole stories in the shorter back of the building, with other functions being housed in the five-story tall front section. With these new technologies, production would increase each year until the early 1900s, when the output reached over 180,000 barrels per year. Because of this growth, more and more room was allotted to packaging and storage. Most of the buildings in the block north of Jefferson Street, save for the brewery itself, were devoted to stocking, racking, and storage.

The most striking addition to the brewery complex by 1894, however, was the new stables, built in a triangular shape taking advantage of all the available space on the triangular lot made by the diagonal cut of Glenwood Street. These stables were designed by Otto C. Wolf in 1894, and created a distinctive landmark that would distinguish the lot from the others around it. The two “legs” of the triangle were both three stories tall and made of brick. The second stories of each

leg were used for the stables, while the third stories were used as hay lofts. The first floors differed in function, however. The first floor of the Jefferson Street leg was used for keg washing, while the first floor of the Glenwood Street leg was used for wagon storage. The corner of the stables where the two legs met at the corner of Glenwood and Jefferson Streets, was rounded and topped with a tower with a small cupola on top. This small corner space had its own uses: a carriage house was located on the first floor, and grain storage on the third floor. The second floor served as an official entrance to the stables. These stables still remain extant in form, if not function, making them an important part of the site's historic integrity.



(Figure 2.11. *Photograph of the brewery building and stables, as they looked after 1894. Source: Library Company of Philadelphia image archive.)*

The buildings were not only built for functionality and practicality, they were also built to be architecturally striking. Even the stables, a purely functional space, were built with architectural details that reflected the wealth and status of the company. Each of the buildings had elaborate arched brick detailing around doors and windows, as well as galvanized iron cornices and towers, in accordance with their Rundbogenstil-inspired design. In the image below, showing the complex around 1900, the eclectic nature of American Rundbogenstil becomes clear. The distinctive round-arched windows appear throughout each of the buildings and evoke Byzantine church motifs, while the malt house's mansard roof draws inspiration from French Second Empire architecture.



(Figure 2.12. *The Poth Brewery as it looked around 1900, looking north at the Wolf-designed malthouse, office, smokestack, and boilerhouse.)*

In June of 1896, the United States Brewers' Association held their 36th annual convention in Philadelphia. They released a souvenir book in honor of the occasion, which highlighted and celebrated the major breweries in the city. During this era, industry leaders and entrepreneurs could most easily learn about cutting-edge technologies and building designs in their field through visiting other factories that were held up as models for the industry.⁷⁶ The brewing industry was no exception. In order to project to the world the message that their industry was strong, principled, and modern, they needed to keep up with all the latest in technology just as every other industry did. The USBA conventions were meant to provide opportunities for brewers from other parts of the country to spend time touring breweries in other cities to get ideas for their own operations. The souvenir book was meant to be not only a memento of the occasion, but also an instructional manual of sorts, a guide book of ideas that visitors could take home with them. The F.A. Poth Company (by this time called F.A. Poth and Sons) was given a full spread in the publication, with the brewery's layout and functions described in great detail. This description gives a good illustration of the way the brewery complex looked during its peak years of operation—the late 1890s and early 1900s. It is also important to understanding the built fabric that still exists, as most of the extant buildings date from this era.

The publication described the brew house as “a model and striking structure in every way.” It was “5 stories in height, 75 feet on 31st Street and 60 feet on

⁷⁶ Bradley, *The Works*, 9.

Jefferson Street." It was built of brick, iron, and "cement concrete" and described as "absolutely fireproof."

"On the first floor and extending into the cellar are four immense brine tanks set level with the floor and railed off by bronze grills and railings. In the center of this building a fine staircase extends to the full height of the structure.

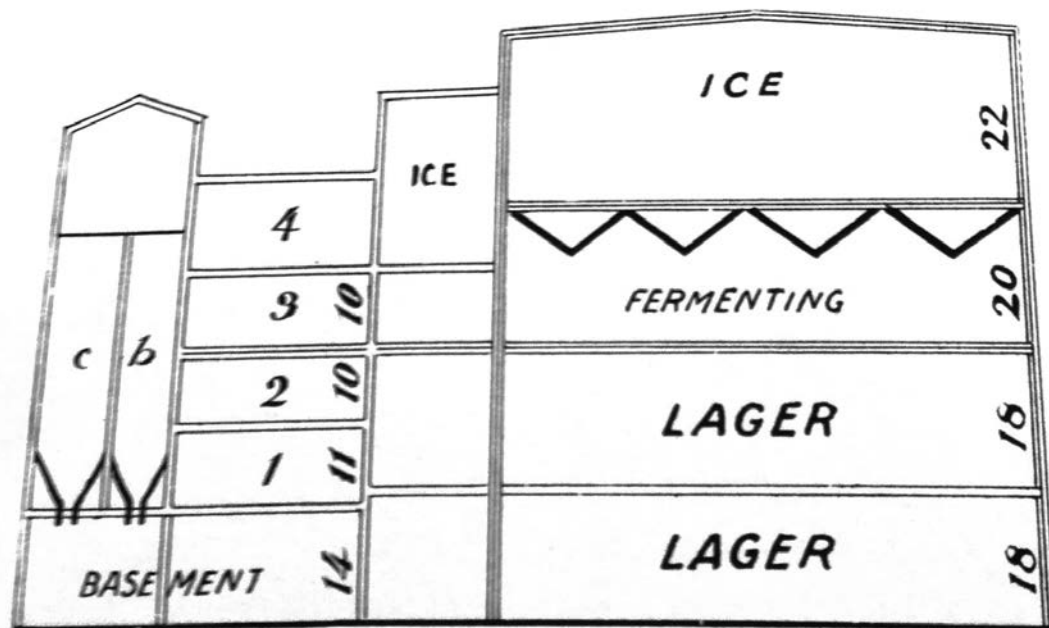
Upon the second floor the two 400-barrel hop jacks are placed. On an intermediate staging above this floor are the supports of the two 380-barrel kettles, the third floor being on a level with the upper or working half of these immense spherical copper cauldrons. Upon another entresol above the kettles are two mash tubs, and on the 4th floor are two malt hoppers, which are placed upon scales and command the mash tubs on the floor below. Here too, are the conversion tubs, a copper hot-water tub of 750 barrels capacity; while the steel cold water tub is elevated into the dome.

The mill house is in the rear of the brewhouse and is equipped with the most modern appliances, all of iron and steel. *This department, like the brewhouse, is a model of practicality and elegance.* Next to the mill house on the 31st Street side is the malt storage house, having a capacity of 120,000 bushels of malt, and arranged to automatically receive, store, weight, deliver, convey, and otherwise handle the malt.

A second building adjoining the brewhouse on the Jefferson Street front and to the west is the refrigerating house. On the ground floor of this building are four 100-ton consolidated refrigerating machines, two on each side of the building. Upon the second floor are the condensers. The third floor is surmounted by a lofty hipped roof and contains the surface cooler. This building is absolutely fireproof. A large shed completes the quadrangle of these buildings and is used as a pitch-yard and cooper shop.

Next to the refrigerated storage house on the Jefferson Street front are the stables and wagon storage buildings. These are L-shaped, having a frontage of 145 feet on Jefferson Street and 230 feet on Glenwood Avenue, 3 stories in height. ...the entire second floor is used as a stable and will accommodate 140 horses. The triangular space between these stables is used as a loading space, a platform at one side extending the full length of the storage house."⁷⁷

⁷⁷ *Souvenir of Philadelphia Prepared for the 36th Annual Convention of the United States Brewers' Association* (Philadelphia: 1896).



SECTION OF A MODEL BREWERY.

A — Brew-house. a — Elevator. b — Grain bins. c — Malt bins. B — Boiler-house with chimney. D — Entrance. E — Office. F — Hop chamber. G — Experiment room. H — Fermenting room. I — Open court. K — Wash room.

(Figure 2.13. A longitudinal section of an ideal brew house, representing what the Poth brew house may have looked like around 1900. From "One Hundred Years of Brewing," 1903.)

Through the early years of the 20th century, the brewery was seen as a model in the industry. It was described in "One Hundred of Years of Brewing" in 1903 as "modern in every respect" with a "sales having reached one hundred and eighty-thousands barrels." The publication also notes that this number represents home consumption, rather than product sold in saloons. As other large breweries often forged partnerships with saloons that sold their product, having 180,000 barrels in output being due to solely home consumption was an impressive feat for a brewery of the era.

After the major alterations of the 1890s, Otto Wolf completed two more projects for F.A. Poth: In 1904, he designed a bandelet and surface cooler housing and in 1905, he designed a new racking room, wash house, storage house, and office. That same year, Frederick Augustus Poth died and his sons took ownership of the company.

V. COMPARISONS WITH OTHER OTTO WOLF BREWERIES



(Figure 2.14. The F.A. Poth and Sons Brewery, circa 1905. 31st and Jefferson Streets, Brewerytown, Philadelphia. Looking west across 31st Street.)

Otto Wolf was a prolific brewery architect and the F.A. Poth Company was far from his only client. His other Philadelphia clients included Bergner and Engel, John F. Betz, J. and P. Baltz, Louis Bergdoll, C. Schmidt and Sons, Welde and Thomas, and the Germania Brewing Company. Of these, many were in Brewerytown within a few

blocks of the Poth Brewery. Bergner and Engel, located at 31st and Master Streets, was the third-largest brewery in the United States by the end of the 19th century—the second-largest single brewery if Milwaukee’s Phillip Best Co. is counted as having two separate locations.⁷⁸ It distributed its products across the nation and the world, winning accolades at exhibitions in Brussels and Paris, and four medals at the World’s Columbian Exposition in 1893. Otto Wolf completed over 20 projects for Bergner and Engel in various cities, including a complete 50,000 barrel-capacity ale house in 1884, an office in 1887, and regional depots in places as far away as Jacksonville, Florida.⁷⁹ Bergner and Engel’s main headquarters, however, was in Brewerytown. Located at 31st and Master Streets, it bordered the Poth Brewery to the south; in fact, many of its outer buildings shared the same block. In addition to being in close proximity, the buildings of the Bergner and Engel Brewery shared many of the same Rundbogenstil architectural characteristics of the Poth Brewery. Its main buildings also had elaborate brickwork, arched windows, galvanized iron cornices, and towers. Its smokestack was also of brick and octagonal-shaped.

⁷⁸ Wagner, *Philadelphia Beer*, 47.

⁷⁹ Wolf, *Breweries and Allied or Auxiliary Buildings*



(Figure 2.15. *The Bergner and Engel Brewing Company, c. 1905. Located at 31st and Master Streets, Brewerytown, Philadelphia. Looking south from Master Street. (If the view was taken looking north the Poth Brewery would be visible in the background, as the two breweries were neighbors). This photo highlights the similar decorative galvanized iron cornices, octagonally-shaped brick smokestack, characteristic brickwork, and eclectic sampling from a variety of traditional styles)*

Another Wolf-designed brewery in Brewerytown was the J. and P. Baltz Brewing Co. at 31st and Thompson Streets. In around 1900, its capacity was around 125,000 barrels a year, just short of the Poth Brewery's productivity for the same period. By 1910, however, its productivity increased to around 186,000 barrels.⁸⁰ Otto Wolf designed seventeen projects for the Baltz company, including a 150,000-bushel malt house in 1897. A photo of the brewery from around 1905 shows a similar crenelated cornice atop the main brew house building, prominent brick

⁸⁰ Wagner, *Philadelphia Beer*, 47

pilasters and quoining on the stables, and galvanized iron cornices with decorative stepped gables.



(Figure 2.16. The J. and P. Baltz Brewing Co. Located at 31st and Thompson Streets, Brewerytown, Philadelphia. North side of Thompson Street shown)



(Figure 2.17. C. Schmidt and Sons Brewing Co. Edward Street, Philadelphia.)

The Christian Schmidt and Sons Brewing Company was located in Kensington, on Edward Street near Second Street and Girard Avenue. Over 100,000 barrels per year were produced at this location, and an additional 50,000 in a second brewing plant located at 38th and Girard.⁸¹ Otto Wolf designed many buildings for C. Schmidt and Sons, including a refrigerated storage house, office building, and malt house in 1891, a stock house in 1893, and a stable in 1894, the same year as Poth's distinctive L-shaped stable was built. Like the Poth stables, the Schmidt stable also exhibits a distinctive L-shape with a tower atop the rounded corner of the two legs. Although the Poth stables are larger in scale and length, the

⁸¹ Wagner, *Philadelphia Beer*, 64.

Schmidt building shares many similarities of design and form, showing a striking example of Otto Wolf's distinctive style.

The Betz Brewery was another Wolf brewery in Philadelphia, located in the Northern Liberties. It had a capacity of 200,000 barrels per year and thus was one of the largest breweries in the nation. Betz beer was shipped internationally, as far away as the Caribbean, South America, and Japan.⁸² The brewery won four medals at the World's Columbian Exposition in Chicago. John F. Betz was also very active in real estate, building one of Philadelphia's first skyscrapers and owning the Grand Opera House, the Fairmount Park Inn, and the Lyceum Theater. Upon his death, it was said that he owned more corner properties than any other individual in Philadelphia.⁸³ Its imposing castle-like brew house was designed by Otto Wolf and reflected the company's great wealth and power. Characteristic Wolf elements include the crenelated cornice atop the main tower, galvanized iron rosette motifs, arched windows, and an L-shaped stable with a tower rising from its corner.

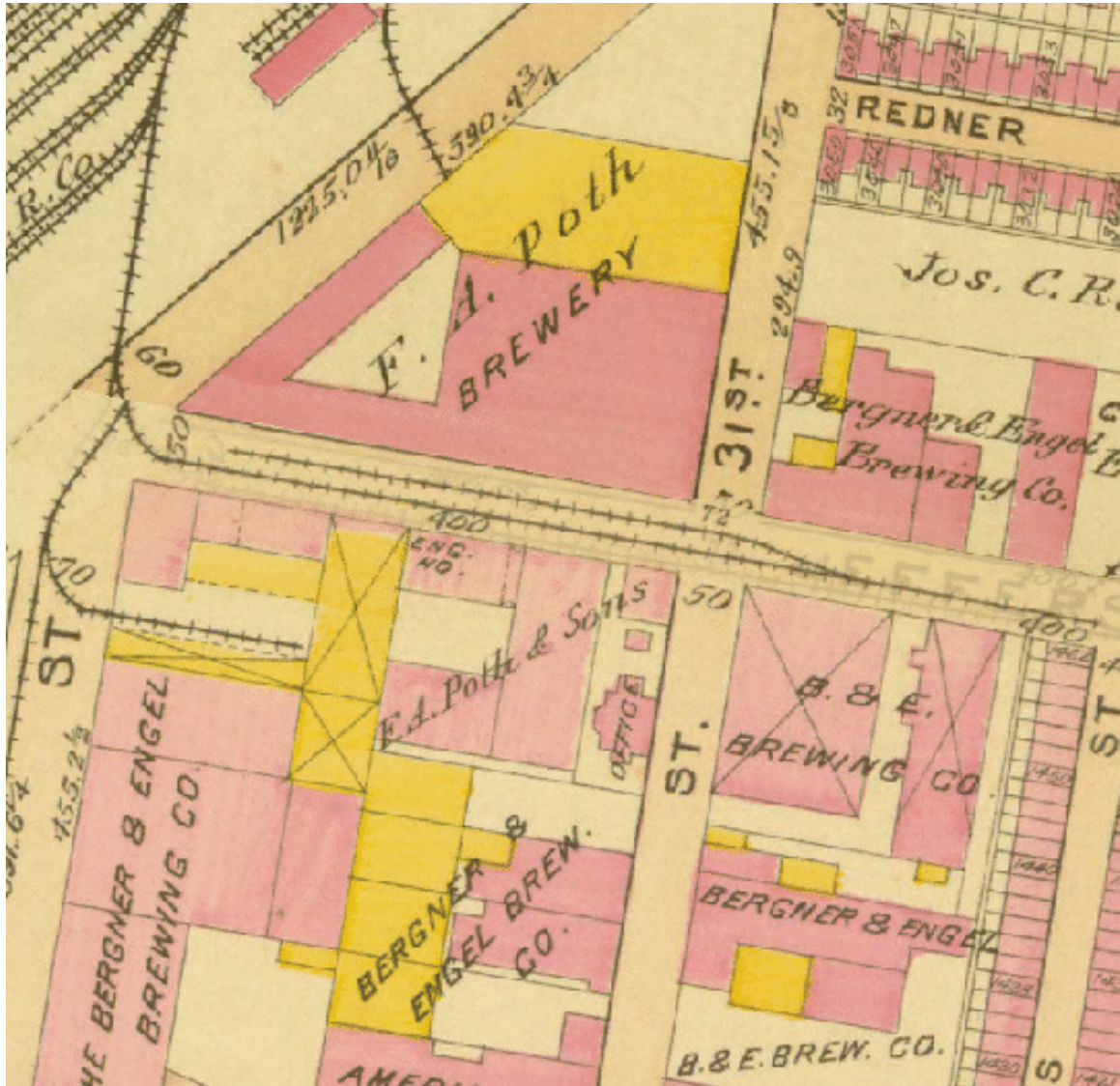
⁸² Ibid, 77.

⁸³ Ibid, 78.



(Figure 2.18. *The Betz Brewing Company, c. 1905. Located at Crown and Callowhill Streets, Northern Liberties, Philadelphia. Crown Street front looking south from Willow Street.)*

VI. SITE EVOLUTION- 1905-2002



(Figure 2.19. The F.A. Poth Brewery and its Brewerytown neighbors as they looked in the 1910 Philadelphia Atlas.)

The brewery underwent a few changes after F.A. Poth's death in 1905, but no more of the large-scale construction operations of the sort that had taken place during the 1890s occurred there. In March of 1907, an addition was built onto the

office at a cost of approximately \$25,000.⁸⁴ Ten years later, the boiler house was torn down to grade level to make room for a coal dump.⁸⁵ A new octagonal chimney was constructed in November of that year, to replace the old one, which had been supported by the demolished boiler house.⁸⁶ This new smokestack was designed by Charles H. Caspar, an architect active from around 1909 until 1930 who worked chiefly on industrial buildings. In addition to Poth and Sons, he also completed projects for the Louis Bergdoll Brewery and the Supplee Aldenray Dairy.⁸⁷ The Caspar-designed smokestack stood until 1929, when it was demolished. Its bricks were salvaged and the site was cleared.

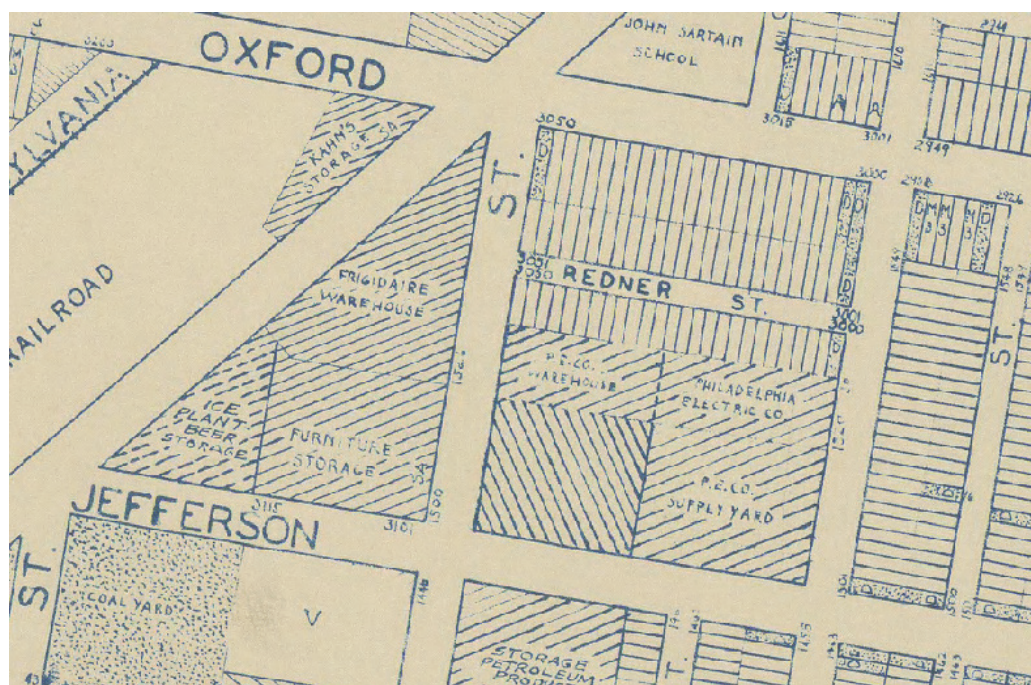


Figure 2.20. The block that housed the former Poth Brewery, from the 1942 WPA Atlas of Philadelphia)

⁸⁴ Philadelphia Building Permit No. 1480. 03/27/1907. Philadelphia City Archives.

⁸⁵ Philadelphia Building Permit No. 1342. 03/13/1917. Philadelphia City Archives.

⁸⁶ Philadelphia Building Permit No. 6062. 11/13/1917. Philadelphia City Archives.

⁸⁷ Philadelphia Architects and Buildings, Caspar, Charles H.



(**Figure 2.21.** A view of the Poth Brewery and Brewerytown from the 33rd Street Bridge, around 1935. A sign on the building on the far left of the image is an advertisement reading “Poth Beer is coming back!”⁸⁸)



(**Figure 2.22.** A 2015 view of the brewery from the same vantage point as the 1935 photo above, showing how the neighborhood context has drastically changed in the past 80 years.)

⁸⁸ Phillip Scranton and Walter Licht. *Work Sights: Industrial Philadelphia, 1890-1950* (Philadelphia: Temple University Press, 1986)

The Poth Brewery went out of business in 1936. Though the Poth brothers went on to attempt other ventures in the brewing industry, partnering with other former brewers whose businesses had been affected by Prohibition, they were unable to revive the operation at 31st and Jefferson. By the 1940s, the buildings, although still owned by the estate of F.A. Poth and administered by Provident Trust, were being used as storage for various contractors. A 1942 WPA map of the city shows that the old brew house was used as furniture storage, the old stables were being used as beer storage, and the north part of the lot was being used as a Frigidaire warehouse. In that same year, a new 1-story 60'x125' warehouse was built. There is a vacant lot indicated where the boiler house and office used to be. The rest of that block was being used as a coal yard. Although these uses helped save the buildings from demolition, they were at best marginal industries that could not provide the worker presence or maintenance that the buildings once had.

During the 1950s and 60s, the main building was used for civil defense supply storage. Alterations were made during this period, including reinforcing some of the walls to help withstand a nuclear attack.⁸⁹ As the building was being used for storing sensitive materials, it needed to be climate-controlled. A 5-ton Worthington water cooler air conditioner was installed on the roof in 1957 at a cost of over \$3,300.⁹⁰ At this time, the building was owned by Staley Group, who contracted Orelan Sheet Metal Co. to install the new air conditioning unit.

⁸⁹ Rich Wagner, *Brewery Tour of Philadelphia*, 1987.

⁹⁰ Philadelphia Building Permit No. 1990, 03/29/1957.

After a series of other owners through the 1970s and 1980s, the buildings were generally used for storage or for marginal small businesses. None of these uses could fully maintain the large industrial spaces and the buildings began to fall into disrepair. Fortunately for the Poth site, however, it would soon have another glimmer of hope. The craft brewing renaissance came to Philadelphia in the first half of the 1980s, with the opening of the Philadelphia Brewing Company, which advertised itself as “Philadelphia’s First Brewery Since Prohibition.”⁹¹ In 1993, structural engineer Jim Cancro saw the growing popularity of craft breweries and decided to open his own. For a business plan and financial advice, he enlisted the help of Jim Bell, a bonds trader with Janney Montgomery Scott, a Philadelphia firm.⁹² In its early years, the Red Bell was a contract brewery, meaning that it partnered with an external company to manufacture products of their creation. Of the two men, Cancro saw the brewery as more of an art, while Bell saw it as a business opportunity. When Bell suggested that they brew a product similar to Budweiser, owing to that beer’s popularity, Cancro quickly discouraged the idea. After attending a beer festival in Germany, they decided to brew a type of Kolsch beer that they named “Red Bell Blonde Ale.” The name led to a series of suggestive advertising slogans, including “Did you have a Blonde last night?”⁹³

In 1995, the Red Bell Brewing Company moved into a portion of the former Poth Brewery. Renovations took longer and were more difficult than anticipated, but soon they hired a brewer, Brandon Greenwood, and outfitted their operation

⁹¹ Wagner, *Philadelphia Beer*, 123.

⁹² Ibid, 122.

⁹³ Ibid, 123.

with a forty-barrel capacity brew house and a bottling line that they obtained from the island of Curacao. Bell and Cancro had many grand plans for their brewery. They envisioned a museum dedicated to telling the story of Brewerytown's glory days, a 2,500-seat beer hall, and a sports complex. Bell raised over \$3 million from selling private stocks and claimed to have attracted hundreds of investors. With this confidence, they expanded to more locations in 1998, including Philadelphia International Airport. Just two years later, however, that location would declare bankruptcy. With the number of craft breweries growing throughout the 1990s, the market favored those that were profitable and had little debt. The Red Bell was profitable—marginally—but as the years went by, it acquired more and more debt and profits went down. Stymied by bankruptcy proceedings on their airport location and unable to compete with other breweries in the same market, the company folded by the end of 2002. The building at 31st and Jefferson was abandoned with many elements of the Red Bell Brewery still left in place. Brewing tanks, signage, and even individual labeled bottles remain inside the building.

CHAPTER 3. THE SITE TODAY



(Figure 3.1. The former Poth Brewery as it stands today. The building seen here was once the main brew house.)

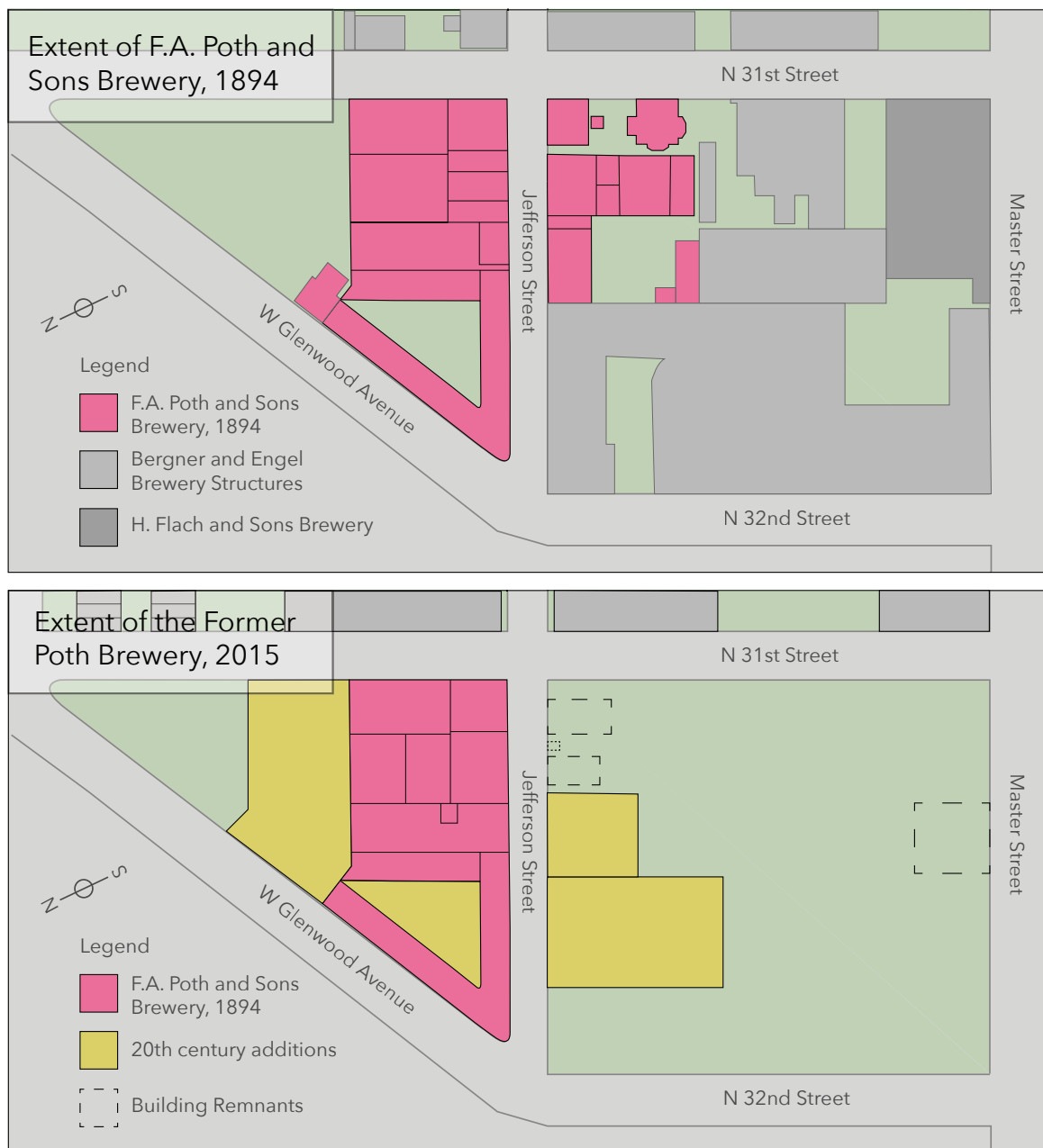
I. EXTANT FABRIC

It is easy to look at what remains of the Poth Brewery today and see only a ruin, but the amount of historic fabric that still remains is actually quite impressive. Its survival is even more significant considering that out of all the 19th century breweries in Philadelphia, it is the only one that remains intact and unaltered in a drastic manner. While it is far from what it was in its heyday, it remains an important relic of Brewerytown's past and a surviving example of the work of Otto Wolf. Many of the building's distinctive Rundbogendstil architectural features

remain. Importantly, the L-shaped stables that form the corner of Jefferson and Glenwood Streets are still extant, creating a continuity of form reflected in the unique block shape. These surviving details have compelled organizations like the Preservation Alliance for Greater Philadelphia to name the Poth Brewery one of the three “Most Endangered” breweries in the city, along with the Gretz Brewery in Kensington and the Ortlieb Brewery in the Northern Liberties.

a. Site Plan

Even though the extent of the brewery complex has been reduced since its heyday around 1900, many original features still remain. The most distinctive of these features is the L-shape of the former stables at the corner of Glenwood and Jefferson Streets. This structure, as well as the main brew house and associated buildings on the north side of Jefferson Street, remain standing. The buildings on the south side of Jefferson Street, including the former malt house, boiler house (which was demolished in 1917 and replaced with a coal yard), and office, are no longer standing. The coal yard which occupied this part of the block existed until at least the 1960s.



(Figure 3.2. Maps comparing the site as it looked in 1894 with how it looks in 2015.)

Despite the historic structures on the south side of Jefferson having been demolished in previous decades, there are many signs of the past that still exist. Bricks and other building materials litter the vacant lot that was once the boiler house and office. There are two foundations, made mostly of concrete, on the site. Their positions could indicate that they are remains from the era of the brewery—perhaps a later incarnation of the boiler house (the earliest boilerhouse on the site was made of brick with no mention of concrete as a building material). There is mention of a new warehouse being constructed in 1942 near the site of the former malt house; thus, these foundations are most likely remnants of that structure.

One of the most fascinating remnants of the brewery's history can be found in between the two concrete foundations. There is a small brick-lined opening in the ground, where remnants of stairs lead to what appears to be a tunnel. Historic maps do indeed show a tunnel and vault network under Jefferson Street that emerged at the same place as the opening still exists today. Workers once used this tunnel to transport materials from the malt house to the brew house, as well as to store valuables in the vaults. It is described in the 1894 Hexamer map as being "brick-arched." Based on the discovery of the tunnel's opening, it is likely that remnants of the tunnel and vault system still exist below ground. If so, it represents a significant surviving aspect of the brewery complex's infrastructure.

It is hard to forget, however, that the Poth Brewery is one of the lucky survivors. At the turn of the 20th century, the Poth Brewery shared its lot south of Jefferson Street with two other breweries; the giants Bergner and Engel and the small H. Flach and Sons. Bergner and Engel's brewery was massive, spanning over

three city blocks and almost entirely surrounding Poth's operation. Today, almost nothing remains of the Bergner and Engel Brewery, save for a one-story brick cooper shop across from the former Poth stables. The Poth brewery, once dwarfed by its neighbor, now dominates the Brewerytown skyline. What was once a block full of large buildings intermingled with one another, some several stories tall, is now a large vacant lot littered with trash and the remains of the structures that once stood there. As such, the brewery's context has been significantly altered since its construction. The siting, however, could be an advantage for a future developer wishing to capitalize on the building's visual prominence and wide viewshed.



(Figure 3.3. *The foundation of a now-demolished structure (most likely a warehouse from the 1940s) near the site of the historic boiler house.)*



(Figure 3.4. *The entrance to the tunnel and vault network below Jefferson Street.)*



(Figure 3.5. *Looking north across the vacant lot where three breweries once stood. The brew house of the Poth is the only one that remains, becoming a stubborn survivor and a Brewerytown landmark.)*



(Figure 3.6. Looking toward the Poth Brewery from the ruins of a structure on the site of the former Bergner and Engel Brewery.)

b. Exterior



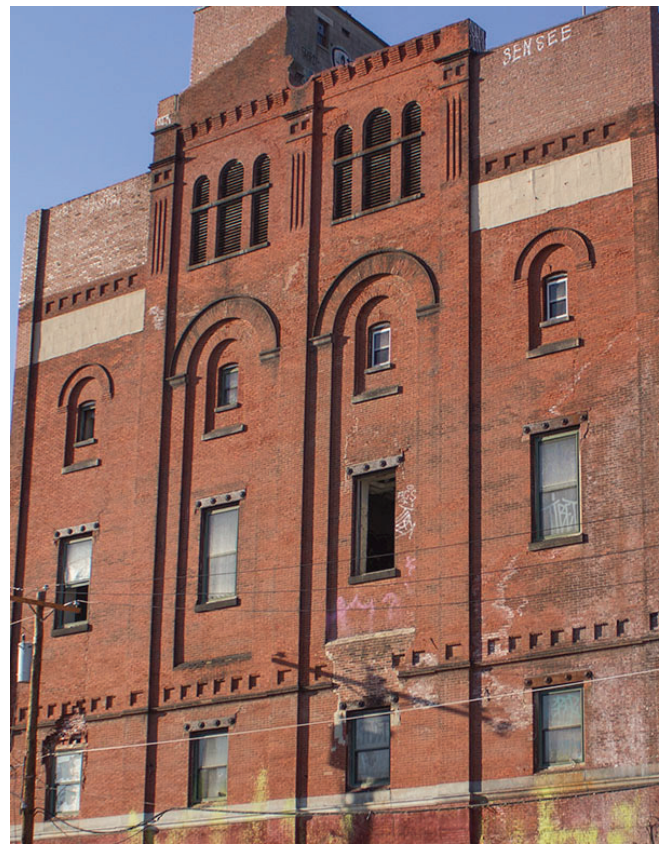
(Figure 3.7. Left: The distinctive rounded corner of the former stables at the intersection of Glenwood and Jefferson Streets. Right: An “F.A. Poth Brewing Company” marker still remains intact on the edge of the building’s rounded corner.)

Many extraordinarily intact features remain on the exterior of the structure. First of all, it is impossible to miss the bright red brick that covers the entirety of the historic brewhouse and stable. At one time, the roof and cornice line of the building sported a galvanized iron gable bearing the name of the brewery and the year it was built. This is now gone, as are the cast iron finials that once topped the L-shape of the stables. Despite these losses, the brick detailing around windows and door openings survives, as well as the round-arched brick windows, crenelated cornices, iron, brick pilasters, rosette motifs, and the six Gothic-esque arched windows atop the highest level of the former brew house. One of the most intriguing surviving details is a plaque on the very edge of the triangular stable bearing the intertwined letters “F.A.P.B.C.” for the “Fred A. Poth Brewing Company.”

c. Interior

Access to the interior of the former brew house and stable is difficult, as it is an abandoned structure.

Therefore, the conclusions I have drawn about the interior state of the building are based upon the limited number of spaces to which I have managed to gain access.



(Figure 3.8. Brick detailing at cornice line and around windows)

Overall, the building is structurally in good shape. By virtue of its industrial-strength construction, walls and ceilings are very thick and engineered to last. Most ceilings in the historic sections of the building are brick arched with steel reinforcements. In certain spaces—such as the large open rooms on the first floor of the brew house—the arches have been painted white so the underlying structure cannot be seen. In other parts of the building, however, the paint has peeled away significantly enough to reveal the underlying brick structure.



(Figure 3.9. The first floor of the former brew house showing surviving roof and wall structure.)

That brick structure is the brewery's most valuable interior asset. Nearly all of the floors and ceilings in the surviving 19th century buildings reflect their original form. Reflecting the arched windows on the exterior, the ceilings are made of rows of long arches "bundled" together to provide strength and stability.



(Figure 3.10. A view of the brick arched ceiling in an area where the white paint has peeled away to reveal the underlying structure. Photo Credit: Lindsey Uhl)

The brick arches are reinforced by steel beams and ties, clearly a part of the original design. Concrete is also used extensively throughout the building. The Poth Brewery was, after all, one of the first breweries in Philadelphia to build using reinforced concrete.

Clues as to the former uses of the building can be found everywhere. In one area on the second floor, there are round patches set into the concrete floor the exact size of a brewing kettle. It is clear that this is where the floor was built to hold the multi-story, gravity-operated brewing kettles, either in the original brewery or for the Red Bell Brewery during its years in business. After the brewery closed, the kettles were taken out and the holes were filled with concrete.



(Figure 3.11. Round patches of lighter concrete on the floor of this room indicate that brewing kettles were once situated here, so large they required cutting circular holes in the floor in order to accommodate them. Photo Credit: Lindsey Uhl)

II. OTHER HISTORIC PHILADELPHIA BREWERIES TODAY

According to brewery historian Rich Wagner, there are 15 historic (built before Prohibition) breweries that remain standing in Philadelphia. Most of these have been converted into commercial, industrial, or residential space. Others, such as the Poth and Gretz Breweries, are currently vacant or in flux.



(Figure 3.12. The Gretz Brewery at 1536 Germantown Ave sits abandoned. Its smokestack, advertising the name of the company, remains intact. Its distinctive corner tavern building, however, was condemned due to numerous structural violations and demolished in 2013.⁹⁴ The building has been nominated to the National Register of Historic Places by concerned members of the Kensington community who wish to save it from demolition, but as of this publication, it has not been accepted for inclusion and still remains vacant.)

⁹⁴ The Preservation Alliance for Greater Philadelphia, "Philadelphia Breweries." <http://www.preservationalliance.com/endangered/philadelphia-breweries/>



(Figure 3.13. Another view of the former Gretz brewery at 1536 Germantown Avenue in North Philadelphia.)



(Figure 3.14. The interior of the Ortlieb Brewery in Northern Liberties. The hole in the floor is where a large brewing tank used to be. The presence of these holes where machinery was built into the structure can present a challenge for those trying to adaptively reuse a brewery building. Credit: Martin Pepe Photography.)

CHAPTER 4. ADAPTIVE REUSE POSSIBILITIES

I. ADAPTIVE REUSE OF INDUSTRIAL BUILDINGS- GENERAL ISSUES

Adaptive reuse is defined as the “process by which structurally sound older buildings are developed for economically viable new uses.” Along with infill or brownfield development, it is considered a way to reduce urban sprawl by utilizing the space that is already located within city limits but is being underutilized. It is seen as a solution to the “broken windows” crisis, a catch-all phrase for describing the supposedly blighting effects of vacant urban fabric on the surrounding neighborhood. J.M. Schilling of the International City/County Management Association argues that “those who live near the squalor of vacant properties suffer adverse impacts on their sense of community, overall quality of life, and property values,” mirroring the views of city officials around the country.⁹⁵ Adaptive reuse first developed as a concept during the 1960s and 70s, coinciding with the rise of both the environmental and historic preservation movements. In 1961, Jane Jacobs wrote that:

“Cities need old buildings so badly it is probably impossible for vigorous streets and districts to grow without them. By old buildings I mean not museum-piece old buildings, not old buildings in an excellent and expensive state of

⁹⁵ Joseph M. Schilling, “The Revitalization of Vacant Properties: Where Broken Windows Meet Smart Growth” (International City/County Management Association, 2002), 4.

rehabilitation—although these make fine ingredients—but also a good lot of plain, ordinary, low-value old buildings, including some rundown old buildings.”⁹⁶

Jacobs’ advocacy for preserving “ordinary” and “rundown” buildings helped contribute to cities and developers looking for new uses for their old industrial buildings. Ghirardelli Square in San Francisco, opened in 1964, is considered the first major example of a successful industrial reuse project.⁹⁷ Over fifty years later, the former chocolate factory remains a bustling shopping and dining area popular with tourists. Other successes from the 1960s and 1970s include the Quincy Market Warehouses in Boston and Baltimore’s Inner Harbor.

Despite these early successes, industrial buildings have often been neglected by preservation advocates due to their lack of association with a famous individual or architect. Abandoned industrial buildings have long been considered “eyesores” and “blighting influences.” Sophie Francesca Cantell of Virginia Polytechnic Institute argues that this belief “ignores the rich architectural detailing, character-defining features, and unique public spaces often created in industrial complexes.” Furthermore, she argues, even successful adaptive reuse projects ignore many valuable opportunities to fully express the building’s heritage. Developers see the potential future uses of a structure for fitting a viable modern use. This is, of course, beneficial when it leads to saving a building that would otherwise have been

⁹⁶ Jane Jacobs, *The Death and Life of Great American Cities* (New York and Toronto: Random House, 1961), 187.

⁹⁷ Sophie Francesca Cantell. “The Adaptive Reuse of Historic Industrial Buildings: Regulation Barriers, Best Practices and Case Studies” (Graduate Thesis, Virginia Polytechnic Institute and State University, 2005)

demolished. When they are converted to apartments, shops, restaurants, or offices, however, significant portions of their history are lost. Cantell argues that in addition to asking the question ‘what could this building become?’ we also ought to consider the question ‘what has this building been?’ This, according to Cantell, will “result in a conversion that does not hide the building’s past.”⁹⁸

In “Tobacco Row: Heritage, Environment, and Adaptive Reuse in Richmond, Virginia,” Daniel Bluestone also argues that adaptive reuse, while beneficial to cities both economically and environmentally, can have detrimental effects on the historical integrity of the buildings. He uses the example of Tobacco Row in Richmond, Virginia, formerly the center of the cigarette industry in the United States. These factories produced up to 100 billion cigarettes a year in their heyday but declined during the second half of the 20th century due to a decline in cigarette consumption and an exodus of companies like Phillip Morris to the suburbs. In the 1990s, the buildings were restored and converted to residential apartments. In 2003, the development was called ““Upscale, upstream, downtown: . . . Where the action is,” and luring “hipsters and hopesters.” The project was celebrated as a great success for adaptive reuse, being called “nationally significant.”

Bluestone, while agreeing that the project has generally been a good thing for Richmond, sees a missed opportunity. He argues that the conversion of the building into apartments took something away from its history. Tobacco production traditionally occurred in large, open room that often stretched from one end of a building to another. The conversion to apartments led to the partitioning of the

⁹⁸ Bluestone, “Tobacco Row,” 5

floors, taking away the industrial character that the structure once had. He states that, once inside, there are very few indicators that it was ever an industrial building at all, let alone a cigarette factory. Even though the project helped solidify preservation's new role as promoters of "embodied energy" and "recycling of buildings" he argues that the Tobacco Row project is symptomatic of the broader problem in historic preservation of privileging exteriors at the expense of interior authenticity.⁹⁹

At the same time, is the legacy of Tobacco Row really worth remembering and preserving? Bluestone grapples with this question, acknowledging that its very nature as a cigarette production facility—manufacturing a product that led to the untimely deaths of millions of people—is complicated enough. Added to this is a century-long legacy of slavery. Slavery is deeply embedded into the origins of nearly every institution in Richmond, and the tobacco industry was no exception. The Hardgrove Tobacco Company, a predecessor of the American Tobacco Company, used slave labor in their facility and built slave quarters on the premises. These slave quarters continued to house black workers at the tobacco factories well into the twentieth century. With a legacy so complex and fraught, is it worth preserving at all?

Bluestone argues that the Tobacco Row development effectively "whitewashes" the history of the buildings, creating a "fuzzy sense of happy history," focusing on the "'charm' and 'character' of the exposed brick." This puts the focus

⁹⁹ Daniel Bluestone, "Tobacco Row: Heritage, Environment, and Adaptive Reuse in Richmond, Virginia," *Change Over Time* 2, no. 2 (Fall 2012): 132-154.

exclusively on the architecture, and specifically on the building's exterior. The interior, however, is where all the action happened, and where the building's legacy lives. By stripping the interior industrial spaces of their functional capacity and giving the building an entirely new, sanitized use, an opportunity to have a conversation about the difficult history is missed. Had at least some of the original spaces been preserved, the building could be used to tell stories in a more effective way. Instead, it is hard to visualize the past in a space that has been dry-walled and partitioned into multiple housing units.

Bluestone's arguments are very relevant to the Poth Brewery and breweries like it. In the uncertain future surrounding these buildings, adaptive reuse is usually considered a very attractive option. Breweries are much more suited to reuse in-kind than were the tobacco factories of which Bluestone wrote. Small breweries occupying a former brewery are a much more feasible reuse option than, say, a new cigarette company reusing the Tobacco Row buildings for its new plant. Considering the increasing stigma against the tobacco industry and the declining number of smokers, the latter option would be nearly impossible to achieve in today's climate. The popularity of microbreweries continues to increase, however, one of the few industries that find a direct counterpart in the present day. Despite the possibilities for reuse in kind, it is almost guaranteed that the industrial fabric of the buildings will still need to be altered in some way. Even when putting a new brewery in an old brewery, technology and regulations have changed so that spaces that were once essential to the operation are no longer needed. Sometimes the economic and practical realities of reuse of a building necessitate interior changes that take away

from the historical integrity of certain aspects of the building. While ideally this would not happen, all too often the alternative is to leave the building in a state of neglect rather than reuse it for a purpose compatible with present-day needs.

Bluestone's views are shared by others in the field of industrial heritage preservation. Gustav Rossnes of the International Committee for the Conservation of Industrial Heritage (TICCIH) lists three objectives for anyone seeking to reuse a historic industrial building: a.) Document functional relationships, spatial layout, the organization of production lines, and interaction with the surrounding landscape, b.) Identify details which are essential to the function of the process, and c.) Documentation of the above in such a way as to enable future access for analysis.¹⁰⁰ These objectives emphasize that the *process* of industry and the ways in which those processes were reflected in the layout of the building are essential things to consider when embarking on an adaptive reuse project.

The questions raised by Cantell and Bluestone prove that adaptive reuse is a very complex undertaking. Tobacco Row took over 10 years from the approval process to the actual construction and completion. Some projects take even longer. Furthermore, there is no guarantee that “if you build it, they will come.” There *are* many very successful examples of adaptive reuse of historic industrial buildings—from luxury lofts to office space to tourist attractions. However, adaptive reuse is not always a clean and simple process. It is not always the “end” of the road for a building struggling with abandonment and vacancy— not all adaptive reuse projects

¹⁰⁰ Gustav Rossnes, “Process Recording,” in *Industrial Heritage Re-Tooled: The TICCIH Guide to Industrial Heritage Conservation*, ed. James Douet (Lancaster, UK: Carnegie Publishing, Ltd., 2012), 64.

are “successful.” Some are profitable for a decade or more, some are profitable for just a few years, and some are never profitable and quickly go bankrupt. But should we define “success” on profitability alone? Even if a business venture ultimately goes bankrupt, are the benefits to the building enough to claim success? After all, the project helped the building to remain standing for a few more years than it might have otherwise stood.

II. ADAPTIVE REUSE OF BREWERIES—SPECIFIC CONCERNS

Many of the issues described in the previous section on industrial buildings in general also apply to breweries, of course. There are also some unique concerns—and advantages—to consider when dealing with a brewery. First of all, the nature of historic brewing processes meant that the buildings were designed around holding certain types of machinery and storage units. As seen in (Figure X.0 from the Gretz Brewery), this equipment is removed after the brewery goes out of business, often leaving large holes in the floor. If a brewery is left in an abandoned state, these holes may be left as they are for years at a time, causing a potential safety hazard and a hassle for contractors. The vertically-oriented layout of 19th-century brewhouses means that large open spaces between floors were full of machinery. While these spaces were essential for the process of brewing, making them appropriate for other uses can be challenging for developers.

Fortunately, there are also many advantages to historic breweries, particularly ones built in the late 19th and early 20th centuries. The brewing process,

compared with other industries of the day, was relatively clean. The ingredients used were mostly natural—water, cereal grains, hops, and yeast. The only major chemical used was ammonia, for the refrigeration system. For this reason, historic breweries themselves are generally not sites where residual toxic waste is a concern. It is possible, however, that other uses of the building after its time as a brewery could have exposed the site to more environmentally-harmful substances. Thus, the full history of the site and its uses should be considered so that environmental remediation can be undertaken if necessary.

Another important concern regarding the adaptive reuse of historic breweries is structural in nature. The Poth Brewery was one of the first breweries in the city to build reinforced concrete slab floors in its new buildings. This, combined with brick arched ceilings and exterior masonry walls over a foot thick, makes for very strong construction. This type of construction is common to brewery structures built around the turn of the 20th century. This was necessary to support all the machinery necessary for the brewing process, but today it is both an advantage and disadvantage for developers. Sturdy construction means that developers can consider a wide variety of uses without having to worry about compromising the basic structural integrity of the building. The sturdiness of the floors and ceilings, however, can make it difficult for wiring, plumbing, and other modern utilities to be installed to individual offices or apartment units.

Many advocates of brewery preservation like Rich Wagner argue that the “icing on the cake” for a brewery reuse project is for it to be turned once again into a

working brewery.¹⁰¹ That way, the unique construction of the building can be utilized to its fullest potential in its original capacity. This also solves the dilemma that Bluestone and Cantell pose; that an industrial building converted to a use other than its original one can lose the architectural characteristics that made it unique. In this, breweries have an advantage over other types of industrial buildings. Most derelict factories no longer have a viable modern industrial use. Either the product that they made is no longer marketable or the space in which the work was performed is outdated due to changing technology or regulations. There *is* an ever-growing market for beer, especially craft beer. The first microbrewery in the nation since Prohibition was the New Albion Brewing Company, which opened in Sonoma, California in 1976.¹⁰² Since then, the craft brewing movement has spread throughout the United States, with more and more people craving independently-brewed beer from small local breweries over mass-produced brands like Budweiser. The Red Bell Brewing Company was a product of this new wave of craft brewing, opening in the early 1990s. Ultimately, the Red Bell was not successful in the long term, but that does not preclude another such craft brewery from utilizing the building in the future. In fact, the Red Bell precedent shows that the former Poth Brewery *can* function as a brewery within the parameters of contemporary needs and regulations.

¹⁰¹ <http://pabreweryhistorians.tripod.com/newbeer.html>

¹⁰² Clark, "Microbrewery: The Process of Making"

III. ADAPTIVE REUSE OF HISTORIC BREWERIES—CASE STUDIES

There are hundreds of historic brewery buildings still standing across the United States. Of these, many are abandoned and/or derelict like the Poth building, but many have been restored or adaptively reused in productive ways—as everything from condominiums to museums to sports bars. The options for reuse, while not endless, are certainly varied and creative. All of these reuse projects have had their ups and downs, and some are more successful than others, but each of them can provide an example of what could lay in store for the Poth Brewery.

CATEGORY 1. Breweries reused as office space

a. The Scheidt Brewery—Norristown, PA

The Adam Scheidt Brewery was in operation for over 100 years; from the 1860s to 1974. It was famous for its “Valley Forge Beer,” an advertisement for which dominated the Norristown skyline for years. The brewing complex consisted of several buildings along Stony Creek, including an L-shaped corner structure dating from 1866, a 3-story octagonal laboratory, and an 8-story Art Deco tower with a distinctive 3-story cylinder of glass bricks.¹⁰³ By the early 1980s, the buildings had fallen into disrepair. Thieves had broken windows to get to the copper vats and other materials that were potentially valuable on the black market. In 1984, Windon

¹⁰³ Elena Santangelo, “A Lesson From Scheidt Beer.” *Norristown Diary* Blog. <http://norristowndiary.blogspot.com/2014/02/a-lesson-from-scheidt-beer.html>

Capital bought the buildings and hired Driscoll Contracting Co. to begin a project turning them into office space. The company hoped that the revitalization of the complex would serve as a catalyst for revitalizing the surrounding neighborhoods in downtown Norristown. There were many challenges to overcome during the repurposing process: removing the old brewery equipment, especially the grain bins, left large holes in the floors that needed to be fixed before the space could be converted to offices. These hurdles were overcome, however, and the complex opened as the Stony Creek Office Park in 1987. It encompasses 6.7 acres, seven buildings, and 57,000 square feet of space.

When it first opened, it was regarded as a preservation success story. Occupancy and rents never met the developers' expectations, however. By 1989, Windon Capital defaulted, leaving more than \$2.6 million in loans. The Montgomery County Industrial Development Corporation, a subset of the



(Figure 4.1. The distinctive glass Art Deco front elevation of the Scheidt Brewery, now the Stony Creek Office Center.)

county government, took control of the property, and owned it for over a decade. In 2000, they put the property up for sale after failing to make any money on the

venture. The county hoped that the \$1.5 million asking price would help pay off some the debts incurred since the acquisition of the property.¹⁰⁴ Today, the complex is at least partially owned by Eadeh Enterprises, a small company that owns and rents out office space around the Southeastern Pennsylvania area. Among the tenants housed in the office park are a branch of the Pennsylvania Department of Revenue, the Tabernacle International Deliverance Church, and a head start facility.



(Figure 4.2. A small octagonal tower, part of the former Scheidt Brewery, now being advertised as office space)

One weakness of the layout of the office park is its disjointed nature. There are seven different buildings scattered throughout the nearly 7-block facility, and each of these buildings are different, owing to their nature as parts of a historic brewery. Furthermore, most of the buildings—save for the former brewery office— are set back from the street, making them

unappealing for businesses that require a street-front presence. One of the most stark examples of this is a small three-story octagonal tower that was once

¹⁰⁴ Mark Archbold. "Montco Puts Stony Creek Office Complex On The Market The Seven-building Norristown Compound Never Met Developers' Expectations, Which Led To A County Takeover." *The Philadelphia Inquirer*, 02 August 2000.

used for storage at the brewery and is now advertised as office space. It appears to be vacant.

Another disadvantage of the Stony Creek Office Park is its location. While it was perfectly situated for its use as a brewery—right at the edge of a large tributary of the Schuylkill River—it is several blocks away from Norristown’s main business district. It is within walking distance of the train station and has a large parking lot for commuters, but its location within a largely residential area makes it feel isolated from the hub of activity in the county seat. For these reasons, it has struggled financially for its entire existence, and may never turn a major profit for its owners. The continued existence of the buildings in a maintained state, however, can be considered a success in itself. The buildings *are* being used, and as long as they are in use, the likelihood of demolition is almost nonexistent. With so many other historic breweries falling into disrepair and being demolished, the fact that the former Scheidt Brewery still exists and has an established reuse is a victory in itself.

CATEGORY 2. Breweries reused as residential spaces



(Figure 4.3. The Brewery Condominiums ... a.k.a. the former Bergner and Psotta Brewery, built in 1875. The adaptive reuse project was completed in 1987, lauded as a success story of brewery preservation.)

a. The Louis Bergdoll

Brewery—Philadelphia, PA

The Louis Bergdoll Brewery is located at 29th and Master Streets, just two blocks away from the Poth Brewery. The complex was occupied as far back as 1856, when Louis Bergdoll first came to the area and opened his City Park Brewery. Like the Poth Brewery, it underwent many renovations and changes over the years. Otto C.

Wolf designed most of the

buildings that stand today, with the exception of the 1917 bottling house. It has been called one of the grandest pre-Prohibition breweries in Philadelphia, even in an era when building large, imposing, and bombastic breweries was just part of the game. It produced a popular lager until 1920, when Prohibition drove it out of business. Although the company tried to restart after the 21st amendment was passed, it was ultimately unsuccessful. As the legend goes, the brewmaster committed suicide as a

result of Prohibition, leaving the brewery without its most knowledgeable employee. Subsequently, a curse was said to haunt the Bergdoll family.¹⁰⁵ It is unclear how much of the story is true and how much is simply media exaggeration, but the truth remains that after Prohibition, the Bergdoll Brewery was unable to survive.

Curse or not, the Bergdoll Brewery has gotten lucky in recent decades. Today, it is one of the best-preserved breweries in Pennsylvania. In the 1980s, three of the buildings were renovated into condominiums—known as “The Brewery.” These three buildings are known as the “the Main House,” “the Brewery House,” and “the Ice House,” reflecting the functions of each of the buildings when they served the brewery. The exteriors of the buildings have been preserved just as they were when they were built, but the interiors have been drastically altered. As a functioning brewery, the structures had open plans on each floor to hold equipment. The conversion to condominiums required that floors be partitioned and divided into individual units. The strength of the floors and walls—originally designed to hold heavy machinery—proved to be both a blessing and a curse. It meant that structural integrity was not a concern during the renovation process, but the solid concrete

¹⁰⁵A sensationalistic 1921 *Evening Tribune* article describes various misfortunes that had befallen the wealthy family in the past years. Grover Cleveland Bergdoll, Louis’ son, was accused of draft-dodging during World War I, bribing officials to send a substitute overseas in his place. Since Grover Bergdoll was of German descent, this offense was seen as tantamount to an act of treason. Several of his family members, including his brother Erwin, were sentenced to time in federal prison, while Grover himself fled to Germany. Subsequently, his other brothers, Charles and Louis Jr., attempted to dissociate themselves from the family name—now tainted by the actions of their brother—but could not find success in business.

floors were sometimes a hindrance for workers trying to install amenities for the condo units, such as electrical wires and plumbing.

Even though the project has been lauded as a success by preservationists since its completion, not every part of the brewery has been preserved. Notably, the former malt house and grain elevator remain in a state of disrepair. Surviving malt houses are often in a precarious position. Due to the machinery needed for the process and the buildings being specifically designed to accommodate it, they can be more difficult to repurpose than other types of brewery structures. Furthermore, the use for which they were built no longer exists. Modern-day breweries rarely produce their own malt—instead, they order it in bulk from an outside supplier that also provides malt to a variety of industries other than brewing. Thus, historic malt houses cannot be repurposed in the same way that brew houses and bottling houses—for instance, can be. The grain elevator, too, presents a challenge for preservationists. Its form is uniquely suited to its original function—storing up to 200,000 bushels of barley to be malted in the malt house.¹⁰⁶ It is located very close to the rail line—a key factor for its original function—which makes it inconvenient for repurposing today. Its structure and materials are not suited for conversion to condominiums like the other buildings, and its reuse as an industrial building seems unlikely given its current context. For now, these two outlying buildings are in a

¹⁰⁶ Technically Philly. “What’s Preserved and What’s Forgotten: The Louis Bergdoll and Sons Brewing Company Grain Elevator.” *The Philly History Blog*.

<<http://www.phillyhistory.org/blog/index.php/2012/07/whats-preserved-and-whats-forgotten-the-louis-bergdoll-and-sons-brewing-company-grain-elevator/>>

precarious situation. Despite this, the Brewery Condominiums project remains considered an undisputable success in brewery preservation.

b. The Class and Nachod Brewery—Philadelphia, PA



(Figure 4.4. *The Class and Nachod Brewery in North Philadelphia, near Temple University. Now used as student housing.)*

This historic brewery was founded in 1853 by Ferdinand Steinbach. By the 1860s, Charles Class took over as proprietor. Class' son, Charles Jr., partnered with Julius Nachod in 1890 to form the Class and Nachod Brewing Company.¹⁰⁷ In 1911, they commissioned architect Charles H. Caspar to construct a modern brewery at 10th and Montgomery. Less than a decade later, the company was forced to close. After Prohibition, F.J. Poth and A.C. Gruenwald purchased the

building and began brewing again, putting Poth beer and brands from other pre-Prohibition breweries back on the market by 1935.

Today, the Temple University campus has expanded to include the former brewery within its boundaries. The building has been transformed into offices and student housing. Marble work above entryways and windows has been restored, the

¹⁰⁷ Wagner, *Philadelphia Beer*, 74.

brick has been repointed, and even though the letters are missing, the ghost of the sign that once said “Class and Nachod” is still visible. Renovations were completed in 2012 and the property is owned by PMC Property Group and operated as the Kardon/Atlantic Apartments.¹⁰⁸ They advertise “a stylish and modern living experience within Temple University's Main Campus.” As with the Bergdoll buildings, the Class and Nachod buildings have been subdivided into individual apartment units and entirely renovated to contemporary designs. The former bottling house and brew house provide space for the majority of the new apartments, while the stables hold a café and recreation area.

Because of the Poth connection, this brewery provides an interesting and relevant example of one of the reuse options that could be considered for the site at 31st and Jefferson. The Class and Nachod location benefitted from its proximity to Temple University and its demand for housing. Even though the Poth Brewery is not in immediate proximity to a university, new townhomes just blocks away house many students and young professionals. This suggests a potential demand for more housing aimed at students and/or young professionals in the Brewerytown area.

¹⁰⁸ PMC Property Group. “Cardon/Atlantic Apartments.”
<<http://pmcpropertygroup.com/properties/kardonatlantic-apartments>>

CATEGORY 3. Breweries Reused as Museums

a. The Potosi Brewing Company—Potosi, WI

The Potosi Brewing Company in Wisconsin is a very interesting example of an extremely self-aware reuse of a historic brewery. The brewery dates back to 1852, when Gabriel Hall and John Albrecht began brewing there. This makes it one of the oldest American breweries still standing today. It was a functional brewery until 1972, when it finally closed. It was added to the National Register of Historic Places in 1980, and in 1995 was purchased by entrepreneur Gary David. In 2004, the American Breweriana Association chose the site as the location of the National Brewery Museum. The museum's mission is to "preserve the rich history of America's breweries through the preservation of brewery memorabilia and advertising."¹⁰⁹ Among the many artifacts housed in the museum are beer bottles and cans, glasses, trays, coasters, and other items popular with collectors.

b. The Germania Brewery- Johnstown, PA

The Germania Brewery was constructed in 1907 in the Cambria section of Johnstown. It operated until 1919, when Prohibition forced its closure. Throughout the 1920s and 1930s, the building was the Ferguson Packing Company. In 1946, the

¹⁰⁹ The Potosi Brewing Company, "About Us."
<<http://www.potosibrewery.com/museums.cfm>>

Morris Electric Supply Company acquired the buildings, and in 1970 it became the Morris Paper Company. The Johnstown Area Heritage Association acquired the property in 1993, after searching for a suitable space to house a new history museum. The building was chosen because it was an example of an important industrial structure that was tied to the working-class ethnic community of the Cambria neighborhood.¹¹⁰ The first two floors of the historic building were renovated and opened as the Heritage Discovery Center in 2001. In 2009, renovations to the third, fourth, and fifth floors were completed.

Today, the building serves as a museum dedicated to the history of Johnstown and the surrounding areas. It features interactive exhibits on immigration, the steel and coal industries, and many more topics.

CATEGORY 4. Breweries Reused as Shopping/Retail

a. The Jackson Brewery—New Orleans, LA

The Jackson Brewery—later known as the “Jax” Brewery was designed by Dietrich Einsiedel in 1891. At that time, it was the largest independent brewery in the South and later in the twentieth century became the tenth-largest brewery in the nation overall. In 1956, it became the central brewery for Jax Beer, a brand

¹¹⁰ Frank & Sylvia Pasquerilla Heritage Discovery Center, “America: Through Immigrant Eyes.” <<http://www.jaha.org/DiscoveryCenter/virtualtour.html>>

developed by the Jax Brewing Company of Jacksonville, Florida. The Jax Brewing Company was founded in 1913, one of the last before Prohibition. It survived Prohibition by producing near beer and other products, before going out of business in 1956. The Jackson Brewing Company of New Orleans purchased the rights to its signature beer and brewed it at their facility until the 1970s, when they too went bankrupt.¹¹¹ In the 1980s, the building was converted into upscale shops and restaurants.

It is located in the French Quarter of New Orleans, in the heart of the city's tourist district. Thus, the main target demographic for the "Shops at Jax Brewery" is people from out of town. The complex advertises sweeping views of the Mississippi River and a variety of local shops. It has a food court and the Jackson Brewery Bistro Bar, which occupies the first two floors of the former brewery.

This reuse project has undoubtedly been successful due to its location in a major tourism center. Even after Hurricane Katrina, the French Quarter continues to see nearly 9 million visitors each year.¹¹² The Poth brewery site does not have that kind of advantage. It is located far outside of Center City. It is relatively close to the zoo, but the river and several rail lines separate it spatially from the zoo and any tourism it might generate.

¹¹¹ The Shops at Jax Brewery, "About Jackson Brewery."

<<http://jacksonbrewery.com/about.html>>

¹¹² Mark Waller, "New Orleans hits second-highest all-time visitor count, 9.01 million in 2012, tourism officials announce," The Times-Picayune, March 12, 2013, accessed February 28, 2015,

<http://www.nola.com/business/index.ssf/2013/03/new_orleans_hits_second-highes.html>

Category 5. Breweries reused as breweries

a. The Weisbrod and Hess Oriental Lager Beer Brewery—Philadelphia, PA



(Figure 4.5. The exterior of the former Weisbrod and Hess brewery, now the Philadelphia Brewing Company.)

In 1882, George Weisbrod and Christian Hess opened a brewery at the corner of Frankford Avenue and Adams Street in Kensington. By 1889, the brewery employed 100 men. It closed in 1920 after the onset of Prohibition. It opened again briefly following the 21st Amendment, but closed for good in 1938. Its subsequent history is very similar to what happened with the Poth site. During World War II, it was used as a tank part assembly plant and after the war it was a family-run tool shop. These uses most likely saved it from the wrecking ball. The stable, dating to 1885, is the

oldest structure on the site. Most of the 19th-century buildings were built by brewery architect A.C. Wagner.¹¹³ It is one of only two breweries left in Philadelphia that were designed by Wagner. Yards Brewery bought the structures in 2001 and began operations in 2002. Since 2007, it has been in business as the Philadelphia Brewing Company. The Philadelphia Brewing Company is a production brewery, with several different types of flagship beers available depending on the season. They distribute their product in only the Philadelphia area and, unlike many other breweries, they do not use a master distributor to sell their beer. This cuts out the middleman, allowing their beers to sell locally for less than other brands.

The brewery complex owned by the Philadelphia Brewing Company (PBC) consists of 7 buildings. Six of them are original to the era of Weisbrod and Hess—the seventh, a centrifuge house, was constructed for the present operation after 2007. There are structures across the street, including the historic smokestack, that are owned by a different entity and are not being maintained. All of the buildings that the PBC owns, however, are occupied and being utilized for a variety of functions. The former stables are used as garages and storage space, where repairs are done in-house on the delivery trucks owned by the brewery. The second floor of a neighboring building is rented out to generate extra income, while the rest of that building is used for the brewery's graphic design department—artists who design labels, bar taps, and promotional material.¹¹⁴ The building now used as the

¹¹³ Carmen A. Weber, Irving Kosmin, and Muriel Kirkpatrick, *Workshop of the World* (Oliver Evans Press, 1990)

¹¹⁴ "Interview with Nancy Barton of the Philadelphia Brewing Company." Personal interview. 4 Apr. 2015.

Philadelphia Brewing Company's main brew house was once the Weisbrod and Hess bottling facility. Tile mosaics depicting full bottles of beer decorate the belt course atop the structure, and on the Amber Street elevation, lettering clearly advertises it as the "Weisbrod and Hess Bottling Department."

When the Philadelphia Brewing Company first came to the site, it had been derelict for many years. Although the buildings themselves were structurally sound, they were full of trash and graffiti and all the windows had been cinder-blocked. Most of the challenges of restoration and reuse came from the sheer size of the buildings—getting everything cleaned, painted, and fixed up took a great deal of time. Fortunately, however, most of the repairs needed were aesthetic in nature, rather than structural. More technical projects included upgrading electrical equipment and plumbing. Although repairs have been ongoing for the past seven years, the brewery is able to operate well in the space that has already been restored. The strength of the buildings has proven to be an advantage. The floors and walls were originally built to withstand heavy loads and large machinery, so they were already sturdy enough to accommodate modern machinery.¹¹⁵

Furthermore, the modern-day brewing process still relies on gravity to move raw materials and ingredients from one part of the brewery to another. Traditionally, malted barley began its life at the very top of the brewhouse, where it was carried downwards to the malt mill, mash tuns, and fermentation vats. Today, automated pipes and chutes are used to transfer materials between each step in the process,

¹¹⁵ Interview with Nancy Barton

but it still relies on gravity for much of the operation. As such, the layout of the historic buildings is well suited to a modern brewing operation.

One major difference between modern brewing operations like the Philadelphia Brewing Company and their 19th-century counterparts is that modern breweries do not need malt houses. 19th-century malt houses were used to turn raw barley and other cereal grains into malt on-site. Today, however, breweries rarely make their own malt. They order it in bulk from suppliers that specialize in producing malt for a variety of purposes—not just for brewing. Malt that has been delivered to the brewery is kept in large silos until it is ready to use. The Philadelphia Brewing Company conducts most of its brewing operations in the same building—the former bottling house. The top floors are dedicated to the brewing process—from malt milling to fermenting. Once the beer is ready to be bottled, it is transported via pipeline to the lower floor, which serves as a bottling facility. Thus, part of the original bottling house retains its original function. The rest of the lower level is a space where palates are stored and processed for shipment.



(Figure 4.6. A modern malt hopper (right) and malt mill (left) at the Philadelphia Brewing Company.)



(Figure 4.7. (L) A modern mash tun (at back) and hot water kettle. (R) The bottling facility at the Philadelphia Brewing Company.)

The Philadelphia Brewing Company is a successful local brewery. At this time, they have no plans to expand outside of the metropolitan area—although there is one supplier in Pittsburgh. Co-owner Nancy Barton credits the brewery's success to several factors. First, the site's proximity to major highway thoroughfares. This makes it easy for shipments of raw materials to be delivered and finished product to be shipped out to different parts of the city. Second, the surrounding community has been very supportive of the project. The part of Kensington surrounding the brewery has been gentrifying over the past decade with new housing being built in the nearby blocks. The PBC claims part of the responsibility for the neighborhood's revitalization. On Saturday afternoons, the brewery opens to the public, offering a tap room with free samples of each of its signature brews as well as tours of the brewery facility. By creating a destination for both community members and people outside the neighborhood, other neighborhood institutions are following in their footsteps. Third, Barton credits the local focus of the brewery as a major factor in its continued success. By keeping their distribution area small, they spend less money on transportation and delivery. It also allows them to be independent suppliers rather than relying on a master distributor to sell their product. Finally, it allows them to closely monitor product quality. After 90 days, if a supplier still has beer that hasn't been sold, the PBC replaces the outdated product with a fresh supply. Barton believes that this helps the company make a name for itself with a reputation for quality and pride in the city.

The Philadelphia Brewing Company is an example of a historic brewery being restored and utilized for its original purpose. The architecture and layout of the historic brewery buildings still serve the modern brewery well, as the strong floors were built to withstand even the heaviest of machinery and the large open spaces do not have to be converted to another use; they can simply be re-utilized for the same types of operations used in the past with only minor alterations. Despite this, however, the process of revitalizing a historic brewery—especially one that has been vacant for many years—is expensive and time-consuming even in the best of circumstances. Renovations can take years to complete, and unexpected problems can delay or halt the process. There *is* hope, however, as success stories like the Philadelphia Brewing Company show.

IV. CONCLUSION: MAKING A CASE FOR THE POTH BREWERY

As demonstrated in the previous sections, there are many reuse options for historic breweries. The stories shown above are just some of the hundreds of projects around the country that have transformed historic breweries. The Poth Brewery's own story shows that adaptive reuse is not always a clean path from Point A to Point B, but its survival to the present day is something to be celebrated. As long as the building remains structurally sound—as it is sure to do, considering its sturdy construction—there is hope for its future.

There is certainly precedent in Philadelphia, and even in Brewerytown. The Louis Bergdoll Brewery and the former Bergner and Engel stables, the only other survivors of the brewery landscape, have been rehabilitated. Brewerytown is a community in flux. New condominiums have gone up a block away from the Poth Brewery on the south side of Master Street and there is currently construction work on the north side of Master Street. Neighborhood revitalization has been a slow process, but there are certainly indicators of change. On the north side of the Poth's triangular block, a sign reading "Welcome to Brewerytown" has gone up, along with a small orchard of trees.



(Figure 4.8. A sign at the triangular corner of Glenwood Avenue and 31st Street that welcomes visitors to Brewerytown.)

With the increasing popularity of craft brewing, there is definite potential for the resurgence of it in Brewerytown as part of a “placemaking” effort. Placemaking is a planning practice that “capitalizes on a local community’s assets, inspiration, and potential, and it results in the creation of quality public spaces that contribute to people’s health, happiness, and well being.”¹¹⁶ The Poth brewery is a perfect tool for placemaking. It is the most prominent survivor of Brewerytown’s heyday, rising above the neighborhood like a red brick jewel. It is visible from the Northeast Corridor, the central artery of North Philadelphia’s historic rail landscape. It is still a very active rail line that serves Amtrak’s Northeast Regional and Acela Express lines, as well as many regional rail routes. Many efforts to revitalize the Northeast Corridor have centered around promoting the extant cultural heritage along the route.¹¹⁷ The Poth Brewery is a centerpiece of Brewerytown and a symbol of its past and present.

The building’s 120,276 square feet of interior space provide ample opportunities for reuse.¹¹⁸ Its remarkably-intact Rundbogendstil elements give it a character rarely seen in other types of industrial buildings. It is a stubborn survivor of an industrial district that has been lost, but not forgotten. It is a prominent reminder of what Brewerytown once was, but also what it could be again. The Poth Brewery is a jewel rising from a landscape of littered bricks and brownfields. It may

¹¹⁶ Society for Creative Placemaking, “What is Placemaking?”
<http://www.pps.org/reference/what_is_placemaking/>

¹¹⁷ The NEC Riders’ Guidebook, Google Books.

¹¹⁸ City of Philadelphia Office of Property Assessment. “1500-36 N 31ST ST ACCOUNT # 884101300.”

not shine as brightly as it did in 1900, but given the right attention and love, it *will* shine again.

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APPENDIX A. TIMELINE OF MAJOR EVENTS

1840: Frederick A. Poth is born on March 20 in Walhaben, Rheinpfalz Province.

1856: Otto Charles Wolf is born in Philadelphia. He will go on to graduate from the University of Pennsylvania with degrees in architecture and engineering.

1861: F.A. Poth emigrates to Philadelphia, looking to make a name for himself. He secures an apprenticeship with brewers Vollmer and Born, where he spends his time shoveling mash out of copper brewing vaults and hauling heavy bags of barley from delivery wagons.

1863 (Approximately): Poth buys his first brewery at Third and Green Streets in what is now the Northern Liberties. At this location, he produces approximately 500 barrels a year

1870: Poth purchases the former Bentz and Reilly Brewery on 31st Street between Master and Jefferson

1876: The year of the Philadelphia Centennial Exposition. Poth opens a rambling beer garden opposite the fairground and sells his signature lagers

1877: The brewery reaches an output of 18,000 barrels

1882: “Report on Malt Mills of the Breweries and Malt Houses of Philadelphia” by E. Hexamer is published, cites the Poth brewery (and many others) with insufficient safety precautions, charges extra for each citation.

1890-1895: The Poth Brewery undergoes major renovations and construction. These projects included a new brew house, stock house, and stable designed by Otto Wolf.

1898: The name of the brewery is changed to “F.A. Poth and Sons” to reflect the coming-of-age of Frederick’s several sons.

1903: The Poth Brewery is featured in “One Hundred Years of Brewing,” where it is described as “modern in every respect.” Production reaches a peak of 180,000 barrels per annum.

1905: Fred A. Poth dies, leaving ownership of the brewery to his sons.

1916: Otto Wolf dies at his home in Overbrook, Pennsylvania.

1920: The Eighteenth Amendment prohibiting alcohol goes into effect, having a devastating impact on the economy of Brewerytown. The Poth Brewery operates under the name Cereal Beverage, Co., throughout Prohibition.

1922: Federal Agents threaten to seize the 31st and Jefferson Street location because of suspected illicit production activity (for the first of many times)

1935: The brewery opens back up briefly, but goes out of business in 1936. Later, F.J. Poth forms a partnership with other former brewers in Philadelphia and operated out of the former Class and Nachod Brewery at 10th and Motgomery.

1942: Most of the buildings on the south side of Jefferson Street have been demolished and the site is now being used as a coal lot.

1950s-60s: The buildings are used as warehouses and storage for civil defense supplies. The L-shaped stable is filled in with a warehouse space, as is the lot in back of the original brew house.

1980s: The Robbins family runs a small family-owned business on the site

1995: The Red Bell Brewing Company moves into a portion of the brewery.

2002: The Red Bell Brewing Co. goes out of business, leaving the site vacant once again.

APPENDIX B. LIST OF PROJECTS BY OTTO WOLF FOR F.A. POTH

Note: Entries appear as they are listed in Wolf, Otto C. *Breweries and Allied or Auxiliary Buildings* (Philadelphia: Wolf, 1906). Numbers indicate project number as assigned by Wolf. Any location other than 31st and Jefferson block is noted.

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- 158. F.A. Poth—Seven Dwellings (1891), West Philadelphia
- 179. F.A. Poth Brewing Company—Wagon Storage (1891)
- 183. Poth—Brew House Alterations (1891)
- 204. F.A Poth—Brewery (1892)
- 207. Stock House (1892)
- 231. F.A. Poth—Stable (1894)
- 240. Stock House Extension (1894)
- 272. Stock House No. 4 (1895)
- 411. F.A. Poth and Sons—Bandelot and Surface Cooler Housing (1904)
- 444. F.A. Poth and Sons—New racking room, wash house, storage house, and office (1905)

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